

The adoption of environmental strategies in large Colombian businesses

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The Adoption of Environmental Strategies in Large
Colombian Businesses

Het implementeren van milieu strategieën in grote
Colombiaanse bedrijven

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Content

Acknowledgements

Summary

1. INTRODUCTION	18
1.1. Motivation for developing this thesis	18
1.2. Emerging economies: The case of Colombian big firms.....	19
1.3. Problem statement: ESA in an emerging economy	20
1.4. Research questions.....	22
1.5. Research methods	22
1.6. Relevance.....	24
1.7. Scope and limitations.....	24
1.8. Content.....	25
2. Literature review and theoretical model.....	26
2.1. Field of study	26
2.2. ESA definition and typologies.....	32
2.2.1. ESA typology according to value creation	33
2.2.2. ESA typology according to business model innovation.....	34
2.2.3. ESA typology according to risk management.....	34
2.2.4. ESA typology according to the response time of firms.....	34
2.3. ESA typology employed for this research	35
2.4. ESA Factors	38
2.5. ESA in Latin America.....	50
2.6. Theoretical model of ESA and ESA factors	52
2.7. Conclusions.....	56
3. Research methods	57
3.1. Data assessment approach	57
3.2. Focus and scope	57
3.3. Case selection	58
3.4. Case study protocol.....	61
4. Case studies	65
4.1. Bank	65
4.2. Chemical company	74
4.3. Utility company	84
4.4. Oil & Gas Company.....	96

4.5.	Agri-business association.	107
4.6.	Cosmetic company.....	117
4.7.	Dairy Company.....	127
5.	Analysis of results	135
5.1.	Environmental Strategies Adoption (ESA).....	135
5.2.	ESA Factors	138
5.3.	Co-occurrence configuration between ESA and ESA factors	140
5.4.	Conclusions.....	144
6.	Discussion.....	145
6.1.	Insights from the empirics and conceptual model	146
6.2.	Co-occurrence between ESA and ESA factors.....	147
6.3.	Green processes: a dissemination strategy in large Colombian firms?.....	150
6.4.	Social responsibility in an emergent economy	150
6.4.1.	Social responsibility in companies that run a dynamic business model.	151
6.4.2.	Social responsibility in companies that run a stable business model	151
6.4.3.	A broader view of ESA in emergent economies	152
7.	Conclusions and future research perspectives	154
7.1.	Answer to main research question	154
7.2.	Contributions	155
7.3.	Limitations and directions for future research	157
8.	PROPOSITIONS	160
9.	BIBLIOGRAPHY	161

List of figures

Figure 1	Distribution of publications over time.	28
Figure 2	Distribution of articles in Journals.	29
Figure 3	Co-word clusters in the literature review	30
Figure 4	Distribution of ESA articles around the world.....	31
Figure 5	Collaborative networks of ESA research.	31
Figure 6	Theoretical Model of ESA and ESA Factors	53
Figure 7	Data coding	63
Figure 8	Data classification	63
Figure 9	ESA and ESA factors at the Bank.....	73
Figure 10	ESA and ESA factors at the Chemical Company.	83
Figure 11	ESA and the ESA factors at the Utility Company.	95
Figure 12	ESA and the ESA factors at the Oil & Gas Company.	105
Figure 13	ESA and the ESA factors at the Agri-business association.	116
Figure 14	ESA and the ESA factors at the Cosmetic Company.....	126
Figure 15	ESA and the ESA factors at the Dairy Company.....	134

List of Tables

Table 1. Features of environmental strategies.....	35
Table 2. Typology of environmental strategies used in this research.	37
Table 3 Co-occurrence configuration of ESA Factors	39
Table 4. Business context and Environmental Strategies.....	42
Table 5 Business models and environmental strategies	44
Table 6. Manager’s perspective and Environmental Strategies	49
Table 7 ESA and influencing factors.....	55
Table 8 Selected cases	60
Table 9 ESA - Bank.....	66
Table 10 Business Context - Bank	68
Table 11. Business Model - Bank.....	69
Table 12 Manager’s perspective -Bank.....	71
Table 13 ESA - Chemical Company	76
Table 14 Business Context - Chemical Company.....	77
Table 15 Business Model - Chemical Company.....	79
Table 16 Manager’s Perspective – Chemical Company.....	81
Table 17 ESA - Utility Company	86
Table 18 Business Context – Utility Company.....	87
Table 19 Business Model - Utility Company	89
Table 20 Manager’s Perspective - Utility Company.....	92
Table 21 ESA – Oil & Gas Company.....	97
Table 22 Business Context - Oil & Gas Company.....	99
Table 23 Business Model - Oil & Gas Company.....	101
Table 24 Manager’s Perspective – Oil & Gas Company.....	104
Table 25 ESA – Agri-business.....	108
Table 26 Business Context – Agri-business.....	109
Table 27 Business Model – Agri-business.....	112
Table 28 Manager’s Perspective – Agri-business	115
Table 29 ESA – Cosmetic Company.....	119
Table 30 Business Context – Cosmetic Company.....	120
Table 31 Business model – Cosmetic Company	121
Table 32 Manager’s perspective – Cosmetic Company	124
Table 33 ESA –Dairy Company.....	128
Table 34 Business Context - Dairy Company.....	129
Table 35 Business model – Dairy Company	130
Table 36 Manager’s Perspective - Dairy Company	133
Table 37 Main environmental strategies observed in the case studies.....	137
Table 38 Main ESA factors observed in the case studies.....	138
Table 39 ESA and ESA Factors across cases	142

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“To the modern student of Ecology and Environment, it is instructive that all artificial pollution events, both regional and global, find their origin in MAN and his activities and, at the same time, the major modes of natural cleansing are accomplished by MICROBES through their activities; on the one hand, God’s highest achievement in Creation is found doing the most destruction, while the lowliest life-form crafted by His hand does the janitor’s duty - the former by disobedience and the latter by Design”

Author unknown¹

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¹ Mentioned by John Sheldon in *Practical Environmental Bioremediation*, CRC Press, 1998

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The adoption of environmental strategies in large Colombian businesses

SUMMARY

This research explains the adoption of environmental strategies of large companies in Colombia. Large companies play an important role in global environmental issues, aimed at controlling climate change and resource scarcity. They are increasingly expected to address these environmental issues. However, companies adopt different strategies; some companies focus primarily on environmental compliance, while others implement new technologies and adopt proactive strategies such as eco-design, cleaner production and industrial symbiosis for waste recycling and shared resources in green systems design.

Understanding the adoption of environmental strategies in companies is important when managing environmental issues and reducing costs for compliance with environmental legislation. These costs are critical in developing countries, where the institutional capacity and enforcement of environmental legislation is often limited. To date, little research has been performed on the implementation of environmental strategies in large companies in developing countries. Hence, the main research question underlying this research is formulated as: *What are the factors that drive Colombian big firms to adopt environmental strategies?* Two sub-questions were used to probe more deeply into the joint domain: Why do Colombian firms adopt environmental strategies? And how do firms adopt such strategies?

To answer these questions, the researcher conducted a literature review of existing theoretical perspectives that explain the adoption of environmental strategies in companies. The researcher proposes an integral analytical model based on three different, complementary perspectives such as: institutional theory, resource based view and corporate social responsibility. The proposed model emphasizes the different dimensions of the adoption of environmental strategies in companies by describing context variables about market forces, emphasizing capabilities of business models, and analyzing perspectives that underline managers decision-making.

The integrated theoretical model has been applied to analyze 7 research cases to understand the adoption of environmental strategies in large companies in Colombia. The cases have been selected based on their diversity in economic activity, business context and implementation of environmental strategies. Various sources were used to collect information about the Colombian case, such as: interviews with environmental managers and industry representatives, sustainability reports, websites, and newspaper and magazine publications.

Case analysis showed a variety of environmental strategies aimed at complying with environmental legislation, implementing cleaner production and developing eco-products. Although results indicated the development of some early projects for industrial symbiosis, these projects were not identified as clear business strategies due to the novice implementation of these initiatives. Furthermore, the analysis clearly showed that in addition to environmental strategies, all 7 cases also applied social strategies ranging from

food supply for the underprivileged, financing of schools and water supply in villages, and of sports activities and cultural projects.

The main factors explaining why large Colombian companies adopt environmental strategies such as developing eco-products are the requirements of export markets and the requirements of international credit funds. Companies that implemented those strategies were characterized by a dynamic business model that participate in environmental improvement programs and were led by profits or societally-oriented managers. Examples illustrate the cases of organic coffee and bank that developed special products for financing sustainable buildings and the issue of environmental bonds.

Companies that implemented cleaner production as an environmental strategy to improve their operational processes distinguish themselves as innovative companies that adopted such strategies in order to increase their competitiveness. Those companies were characterized by dynamic business models and were led by managers who pursue profits through more efficient processes. Other companies confirmed that they are also implementing cleaner production as an environmental strategy because their competition is doing this too and because they expect cleaner production to contribute to compliance with environmental laws. Examples of first-movers included a manufacturer of building materials (i.e. pipes) who, as one of the pioneers in Colombia, uses cleaner production, and an oil company, as a second-mover, that recently implements a strategy to produce efficient oil drums.

Companies that implemented environmental compliance as their primary environmental strategy are supervised by environmental authorities and are part of global corporations such as a hydroelectric power station. They have stable business models and are led by managers who strive for legality.

The analysis of the 7 Colombian cases shows how the theoretical multidimensional model is useful to analyze the adoption of environmental strategies in large companies. The contribution of the model relies on the understanding of how different factors that apply at specific dimensions, indicate certain trends and combinations of factors influencing the implementation of specific environmental strategies. For example, companies in a more competitive market with explicit environmental requirements were often characterized by dynamic business models and profit-oriented managers willing to adopt a cleaner production or an eco-product strategy. On the other hand, companies in a market without clear environmental requirements from customers were more focused on environmental compliance and implemented less proactive environmental strategies such as environmental licensing or pollution control.

In addition to the aforementioned analytical contribution of this research, the results and proposed model can be used by managers of companies to understand the environmental strategy of organizations as a starting point for reform and progress. Operating the environmental strategy at different dimensions is helpful in identifying motivations and potential obstacles and opportunities that affect the progress of environmental strategies. This knowledge is also important for setting up programs and / or legislation that promote environmental strategies in companies.

Furthermore, the analysis of the 7 cases shows that companies that adopted cleaner production and eco-products strategies, often also implement advanced social programs. This observation indicates that environmental strategies of Colombian companies are linked to social innovation strategies. The outcome of the analysis of the large Colombian companies shows that the type of environmental strategies adopted is comparable to the strategies adopted by large companies in other parts of the world. So it seems that the specific context of a developing country has little influence on the selection of environmental strategies in the studied companies.

The findings of this research are based on the analysis of 7 cases of large companies in Colombia. The model presented in this study provides assistance as a useful lens for analysis regarding the conveyance between different influencing factors and environmental strategies modalities. In order to deepen knowledge about the adoption of environmental strategies by companies, for refining the model, further research would be ideal, in particular on small and medium-sized businesses and on companies in other countries.

Het implementeren van milieustrategieën in grote bedrijven in Colombia

Samenvatting

Dit onderzoek verklaart het implementeren van milieustrategieën van grote bedrijven in Colombia. Grote bedrijven spelen een belangrijke rol in de globale milieuproblematiek, gericht op het beheersen van klimaatverandering en grondstof schaarste. In toenemende mate wordt er van ze verwacht dat ze deze milieu thema's aanpakken. Echter bedrijven implementeren verschillende strategieën; sommige bedrijven richten zich vooral op het nakomen van milieu wetgeving, waar anderen nieuwe technologieën implementeren en proactieve strategieën toepassen zoals eco—ontwerpen, schoner produceren en industriële samenwerking voor afval hergebruik.

Het begrijpen van de implementatie van milieustrategie in bedrijven is van belang om milieuproblematiek te beheersen, en om kosten kunnen besparen voor het naleven van milieuwetgeving. Deze kosten zijn kritisch in ontwikkelingslanden, waar de institutionele capaciteit om milieuwetgeving na te leven, vaak gelimiteerd is. Tot op heden is er weinig onderzoek gedaan naar de implementatie van milieustrategieën in grote bedrijven in ontwikkelingslanden. Vandaar dat de onderzoeksvraag die ten grondslag ligt aan dit onderzoek, geformuleerd is als: “Welke factoren beïnvloeden de implementatie van milieustrategieën in grote bedrijven in Colombia?”. Deel vragen onderzoeken; “Waarom grote bedrijven in Colombia milieustrategieën implementeren?” En “Hoe zij dit doen?”.

Om deze vragen te beantwoorden heeft de onderzoeker een literatuurstudie uitgevoerd naar bestaande theoretische modellen die uitleg verschaffen over implementatie van milieustrategieën in bedrijven. De onderzoeker stelt een integraal analytisch model voor gebaseerd op drie verschillende, complementaire perspectieven zoals: institutionele theorie, middelen theorie en sociale betrokkenheid theorie. Het voorgestelde model benadrukt de verschillende dimensies van de implementatie van milieustrategieën in bedrijven doormiddel van het beschrijven van context variabelen over de marktwerking, het benadrukken van kosten en capaciteiten van bedrijfsmodellen, en het analyseren van waarden die besluitvorming van managers onderstrepen.

Het geïntegreerd theoretische model is toegepast voor het analyseren van 7 onderzoeks-casus die de implementatie van milieustrategieën in grote bedrijven in Colombia analyseren. De casus zijn geselecteerd op basis van hun diversiteit voor wat betreft economische activiteit, achtergrond, en implementatie van milieustrategieën. Verschillende bronnen zijn gebruikt om informatie over de casus te verzamelen, zoals: interviews met milieu - en algemene managers, duurzaamheid reporten, web-sides, en kanten en magazine publicaties.

Analyse van de casus geeft een variëteit weer van verschillende milieustrategieën gericht op het naleven van milieuwetgeving, het implementeren van schoner produceren en het ontwikkelen van eco-producten. Hoewel er enkele beginnende projecten geïdentificeerd zijn voor afval hergebruik, zijn deze projecten niet aangeduid als duidelijke bedrijfsstrategieën vanwege het beginnende karakter van deze initiatieven. Verder gaf de analyse duidelijk weer dat alle 7 casus naast milieustrategieën ook sociale strategieën toepasten variërend van voedselvoorziening voor onderbedeelde, financiering van schooltjes en watervoorziening in dorpen, en sport en culturele projecten.

Als belangrijkste factoren die verklaren waarom grote Colombiaanse bedrijven milieustrategieën implementeren zoals het ontwikkelen van eco-producten, zijn aan te duiden de eisen van export markten en eisen van internationale krediet fondsen. Bedrijven die deze strategieën implementeren worden gekenmerkt door een dynamisch bedrijfsmodel die deelnemen aan milieuverbetering programma's, en worden geleid door winst georiënteerde managers. Voorbeelden illustreren de cases van organische koffie en bank die speciale producten ontwikkelden voor het financieren van duurzame gebouwen en de uitgifte van milieu obligaties.

Bedrijven die schoner produceren implementeren, als milieustrategie om hun operationele processen te verbeteren, onderscheiden zich als technologie innoverend om hun concurrentiekracht te vergroten. Andere bedrijven bevestigde dat ze schoner produceren implementeren als milieustrategie omdat hun concurrentie dit ook doet en omdat ze verwachten dat schoner produceren bijdraagt aan het naleven van milieuwetgeving. Voorbeelden zijn een producent van bouwmaterialen die als een van de pioniers in Colombia schoner produceren toepast, en een oliebedrijf dat onlangs ook een strategie implementeert om efficiënte olievaten te produceren. Bedrijven die schoner produceren als milieustrategie implementeren worden gekenmerkt door dynamische bedrijfsmodellen en worden geleid door managers die efficiënte processen nastreven.

Bedrijven die het naleven van milieuwetgeving als hun voornaamste milieustrategie implementeren staan onder toezicht van milieu autoriteiten en zijn onderdeel van globale corporaties zoals bijvoorbeeld een waterkrachtcentrale. Ze hebben stabiele bedrijfsmodellen en worden geleid door managers die legaliteit na streven.

De analyse van de 7 Colombiaanse casus laat zien hoe het theoretische multidimensionaal model, nuttig is om de implementatie van milieustrategieën in grote bedrijven te analyseren. De bijdrage van het model geeft aan hoe verschillende factoren die van toepassing zijn op verschillende niveaus, bepaalde trends en combinaties van factoren aan geven de implementatie van milieustrategieën beïnvloeden. Bijvoorbeeld bedrijven in een meer competitieve markt met expliciete milieu eisen worden vaak gekenmerkt door dynamische bedrijfsmodellen en winst georiënteerde managers. Bedrijven in een markt zonder duidelijke milieueisen van klanten, zijn meer gericht op het naleven van milieuwetgeving en implementeren minder proactieve milieustrategieën zoals schoner produceren of het ontwikkelen van eco—producten.

Naast deze analytische bijdrage van dit onderzoek, kunnen de resultaten gebruikt worden door managers van bedrijven om de milieustrategie van organisaties te begrijpen als uitgangspunt voor de hervorming en vooruitgang. Het bedrijven van de milieustrategie op verschillende niveaus is nuttig om motivaties en mogelijke obstakels en mogelijkheden te identificeren die van invloed zijn op de vooruitgang van de milieustrategieën. Deze kennis is ook van belang voor het opzetten van programma's en of wetgeving die milieustrategieën in bedrijven bevorderen.

Daarnaast laat de analyse van de 7 casus zien dat bedrijven die schoner produceren en eco-producten ontwikkelen, ook vaak gevorderde sociale programma's implementeren. Deze waarneming geeft aan dat milieustrategieën van Colombiaanse bedrijven, verbonden zijn met sociale innovatiestrategieën. De uitkomst van de analyse van de grote Colombiaanse bedrijven laat zien dat de implementatie van hun milieustrategieën vergelijkbaar is met die van grote bedrijven in andere delen van de wereld. Het lijkt er dus op dat de specifieke

context van een ontwikkelings land, weinig invloed heeft op het implementeren van milieustrategieën in grote bedrijven.

De bevindingen van dit onderzoek zijn gebaseerd op het analyseren van 7 casus van grote bedrijven in Colombia. Om kennis over het implementeren van milieustrategieën door bedrijven te verdiepen, is verder onderzoek nodig met name naar midden en klein bedrijf en naar bedrijven in andere landen. Het model voorgesteld in dit onderzoek biedt daarbij hulp als een nuttige lens voor analyse.

La adopción de estrategias ambientales en grandes compañías de Colombia

RESUMEN

La presente investigación explica la adopción de estrategias ambientales por parte de las grandes compañías de Colombia. Las grandes compañías juegan un papel importante en el manejo de los temas ambientales globales, relacionados con el cambio climático y la escasez de recursos. Sin embargo, éstas responden de manera diferenciada al adoptar distintos tipos de estrategias; mientras algunas empresas solo cumplen con la ley, otras van más allá al implementar nuevas tecnologías y adoptar estrategias proactivas como el eco-diseño, la producción más limpia y la simbiosis industrial para el aprovechamiento de residuos o compartir recursos en el diseño de sistemas colaborativos verdes.

El análisis de la adopción de estrategias ambientales se vuelve importante al momento de manejar problemas ambientales y de reducir los costos por cumplimiento de la legislación ambiental. Estos costos son críticos en los países en vía de desarrollo, donde la capacidad institucional y el cumplimiento de la legislación es aún limitado. En este contexto, se requiere desarrollar una mayor investigación acerca de la adopción de estrategias ambientales en grandes compañías en economías en desarrollo. Por lo tanto, la principal pregunta de investigación está formulada como: *¿Cuáles con los factores que impulsan a las grandes compañías colombianas en la adopción de estrategias ambientales?* Se utilizaron dos sub-preguntas para profundizar más en esta temática: *¿Por qué las empresas colombianas adoptan estrategias ambientales?* y *¿Cómo las empresas adoptan dichas estrategias?*

Para resolver las preguntas de investigación, el autor llevó a cabo una revisión de las perspectivas teóricas existentes que explican la adopción de estrategias ambientales a nivel empresarial. El autor propone un modelo analítico integral basado en tres diferentes perspectivas teóricas a saber: teoría institucional, la teoría de los recursos y responsabilidad social corporativa. El modelo propuesto enfatiza las diferentes dimensiones de la adopción de estrategias ambientales al describir las variables de contexto acerca de las fuerzas del mercado, enfatizar las capacidades de los modelos de negocio y analizar perspectivas que subrayan la toma de decisiones de los gerentes.

El modelo teórico integrado se ha aplicado en el análisis de 7 casos empresariales para estudiar la adopción de estrategias ambientales en grandes compañías de Colombia. Los casos fueron seleccionados con base en la diversidad de su actividad económica, el contexto empresarial y la implementación estrategias ambientales. Diferentes fuentes de información fueron utilizadas como: entrevistas con gerentes ambientales y representantes de la industria, reportes de sostenibilidad, páginas web y publicaciones en periódicos y revistas.

El análisis de casos identificó diferentes estrategias ambientales enfocadas al cumplimiento con la legislación ambiental, la implementación de la estrategia de producción más limpia y el desarrollo de eco-productos. Aunque los resultados indicaron la existencia de algunos proyectos relacionados con la simbiosis industrial, estos proyectos no fueron identificados como claras estrategias de negocio debido a la reciente

implementación de dichas iniciativas. Así mismo, el análisis claramente estableció que, además de las estrategias ambientales, todos los 7 casos aplicaron estrategias sociales que abarcaron desde el suministro de comida para los necesitados, el financiamiento de escuelas y de acueductos en poblaciones y de actividades deportivas y proyectos culturales.

Los principales factores que determinan porque las grandes compañías colombianas adoptan estrategias ambientales asociadas al desarrollo de eco-productos están asociados al cumplimiento de los requerimientos de mercados de exportación y de fondos de crédito internacional. Las compañías que implementaron ese tipo de estrategias se caracterizaron por contar con un modelo de negocio dinámico y participar en programas de mejoramiento ambiental y a su vez son lideradas por gerentes que cuentan con una perspectiva económica o de carácter societario. Ejemplos de este tipo de casos incluyen la producción de café orgánico y un banco que desarrolló una línea de productos para el financiamiento de edificios sostenibles y la colocación en el mercado de bonos ambientales.

Las compañías que implementaron estrategias de producción más limpia para el mejoramiento de los procesos, se caracterizaron por su innovación tecnológica y la adopción de dichas estrategias para aumentar su competitividad. Esas compañías contaron con modelos negocio dinámico y fueron dirigidas por líderes con perspectiva económica a través de procesos más eficientes. El análisis adicionalmente confirmó la implementación de estrategias ambientales de producción más limpia, en otro tipo de compañías influenciada por sus competidores y que esperan que una producción más limpia contribuya con el cumplimiento de la legislación ambiental. Para el caso de las compañías que buscaban alcanzar una mayor competitividad, los ejemplos incluyeron a un fabricante de materiales de construcción (ej. tuberías) que como empresa pionera en Colombia adoptó una producción más limpia y para los casos influenciados por sus competidores, se encontró a una compañía de petróleos que de manera reciente también implementa dicha estrategia para la producción eficiente de barriles.

Los casos que implementaron estrategias de cumplimiento como su principal estrategia ambiental cuentan con supervisión directa de las autoridades ambientales y forman parte de corporaciones globales como el caso de estaciones hidroeléctricas. Este tipo de empresas cuentan con modelos de negocio estables y son dirigidas por gerentes que cuentan con su enfoque principal hacia el cumplimiento legal.

El análisis de 7 casos colombianos muestra la utilidad del modelo teórico multidimensional para analizar la adopción estrategias ambientales en grandes compañías. La contribución del modelo radica en el entendimiento de como diferentes factores se aplican en dimensiones específicas, indicando ciertas tendencias y combinaciones de factores influenciando la adopción de estrategias ambientales específicas. Por ejemplo, compañías en mercados más competitivos con requerimientos ambientales específicos se caracterizan por contar con un modelo de negocio dinámico y gerentes con perspectiva principalmente económica dispuestas a apoyar estrategias enfocadas a la producción más limpia o al desarrollo de eco-productos. Por otro lado, compañías sin claros requerimientos ambientales por parte del consumidor están más enfocadas al cumplimiento de regulación ambiental y a implementar estrategias ambientales con menor proactividad asociadas por ejemplo al licenciamiento ambiental o al control de la contaminación.

De manera adicional a las contribuciones analíticas realizadas, los resultados de esta disertación y el modelo propuesto pueden ser utilizados por los gerentes para entender la estrategia ambiental de las organizaciones como un punto de partida para evolucionar y progresar en su desempeño ambiental. La operación de la estrategia ambiental en diferentes dimensiones es clave en la identificación de motivaciones y posibles obstáculos y oportunidades que afecten la implementación de la estrategia ambiental. Este conocimiento es también importante para establecer programas y/o regulaciones que promuevan la adopción de estrategias ambientales en las compañías.

Adicionalmente, el análisis de los 7 casos permite establecer que las compañías que adoptaron estrategias de producción más limpia y de eco-productos, a menudo también implementan programas sociales avanzados. Esta observación podría indicar que las estrategias ambientales de las compañías colombianas están unidas a las estrategias de innovación social. El análisis de las grandes compañías colombianas permite establecer que el tipo de estrategias ambientales adoptadas es comparable a aquellas estrategias adoptadas en grandes compañías de otras partes del mundo. Este resultado pareciera indicar que el contexto específico de país emergente tiene baja influencia en la implementación de estrategias ambientales en las grandes compañías analizadas.

Los hallazgos de esta investigación se basan en el análisis de 7 casos de grandes compañías en Colombia. El modelo presentado en este estudio provee un lente de análisis con respecto a la convergencia entre diferentes factores de influencia y los tipos de estrategia ambiental adoptados por las compañías. Con el fin de profundizar acerca de la adopción de las estrategias ambientales para refinar el modelo es ideal la realización de futuras investigaciones en particular en pequeñas y medianas compañías y en compañías de otros países.

The adoption of environmental strategies in large Colombian businesses

1. INTRODUCTION

The present research contributes to understand the adoption of environmental strategies in large Colombian businesses. Given the critical role played by industry in the environmental situation of the world, the adoption of environmental strategies on the part of companies is central to controlling important issues such as climate change and resource scarcity. Furthermore, understanding Environmental Strategy Adoption (ESA) is important when it comes to promoting a socially proactive behavior in companies. At this point, emerging economies provide a suitable setting to research this problem because of their weak legal enforcement and particular social conditions that could influence firms' adoption of environmental strategies. In this context, and resulting from a review of the literature on the topic, the present work has developed a new theoretical model that integrates a series of ESA factors. Furthermore, a general hypothesis explaining ESA has been put out and tested in large Colombian businesses. To introduce the topic, I describe what led me to develop the thesis, followed by a statement of the theoretical problem, the research questions posed, research methods followed, the overall relevance of the study and a thesis outline.

1.1. Motivation for developing this thesis

The international community has expressed great concern about the effects of climate change on the economy and quality of people's life, the high levels of pollution of the ecosystems, biodiversity loss and the depletion of natural resources (Stål & Corvellec, 2018). This has raised the urgent need to preserve the environment and implement a set of corporate strategies that guarantee sustainability at the planetary level. Specifically regarding greenhouse gases, and in spite of the development of agreements by the international community and the global efforts to curb the emission of these contaminants, their levels have continued to rise (Victor et al., 2014). Besides, only one third of global initiatives have been highly effective in achieving a substantial change in the behavior of target groups through binding rules for partners and coordination with international stakeholders (Dzebo, 2019). In general, "failure in ESA is one of the most investigated issues in institutional theory" (Durand & Thornton, 2018) specifying that failure in ESA could obey to a "discrepancy between the adoption of environmental strategies to achieve legitimacy and the adoption of such strategies in achieve efficacy" (Arena et al., 2018).

Industry plays an important role in pollution prevention, since the transformation of materials generates by-products, emissions, discharges and wastes, all of which affect the ecosystems and quality of people's life (Bello et al., 2013). Furthermore, industry is considered responsible for the majority of environmental impacts (Stål & Corvellec, 2018). Therefore, it is important that companies adopt environmental strategies to mitigate the impact of their activity. For instance, firms are increasingly expected to address environmental issues even if such concerns may seem unrelated to core business

practice (Stål & Corvellec, 2018). Although industry is subjected to institutional pressures by regulatory entities for environmental protection, companies respond differently to this pressure by adopting diverse levels of compliance with environmental regulation (Morana, 2013) and different types of strategy (M. A. Delmas & Toffel, 2010; Petulla, 1987). The response to institutional pressures regarding ESA can vary according to the readiness of organizations (e.g. business models) and how they perceive or interpret these pressures (e.g. manager's perspectives) (Sayed et al., 2017). Furthermore, while some industries only comply with the law, others go much further and develop green products or implement green processes (Van Marrewijk, 2003; Dangelico, 2010).

1.2. Emerging economies: The case of Colombian big firms

Focusing on developed countries mainly from North America and Europe (Silvestre, 2015; Frynas, 2006), most studies on corporate responsibility have dealt with stakeholder management for reputational positioning (Bansal, 2005; Milstein, Hart, & York, 2002), analysis of firm capabilities to achieve resource efficiency and competitive advantage (Hart & Milstein, 2003), and the influence of managers' perspectives and leadership for ESA (Lozano, Carpenter, & Huisinigh, 2015). Hence, additional research is needed to determine which ESA factors could be more successful in developing economies (Henriques & Sadorsky, 2006), which certainly face specific social and environmental issues in addition to "weak institutional contexts with low embeddedness and low internalization of laws" (Rodrigues, 2013).

When it comes to identifying general ESA trends and influencing factors, research on emerging economies is promising because is likely to contribute to "addressing global issues with more inclusive practices" (Jia et al., 2018) and increase the generalizability of research across different economies (Brik et al., 2013; Esfahbodi et al., 2016).

In addition, emerging economies constitute a good research setting to advance in the quest for an answer to the above-mentioned problem of ESA. Such setting is provided by the attributed weakness of the legal context in third world countries (Henriques & Sadorsky, 2006), which allows testing for the influence of other factors such as green markets, societally-oriented leaders and dynamic business models. However, the prevalent resource scarcity that features these economies makes it necessary to focus research on large firms, which are less limited by this factor (González-Benito & González-Benito, 2006) and are, therefore, relatively free to adopt environmental strategies.

On these grounds, the present research focused on the adoption of environmental strategies in big Colombian "green" companies. This dissertation examines factors for strategies adoption in an emerging economy and the heterogeneity of environmental strategies resulting to these factors. In addition to previous studies, this dissertation proposes and contrasts a theoretical framework for ESA. Colombia was chosen for the study not only as the home country of the researcher, but also because of its specific characteristics as an emerging economy. In effect, the country holds a combination of geographical position, landscapes and thermal floors which favors a natural capital (Aldana-Domínguez, J. et al., 2017) that other countries wish to preserve, since it facilitates important social and economic developments (Cárdenas Pinzón & Vallejo Zamudio, 2016). In recent years, Colombia has achieved important political and economic

progress which, nevertheless, does not reduce the risk to which its ecosystems are exposed (OECD, 2016).

Furthermore, it is key to conduct research in an emerging economy such as Colombia because its economic approach has traditionally been extractive and consequently the development has negatively impacted important ecosystems (Sarmiento-Castillo J & Pérez-Rincón M, 2018) such as moors, Andean and dry forests (Humboldt Institute, 2019). Colombian ecosystems also require protection because of the effects of additional activities such as extensive livestock farming, urbanization and transportation (OECD, 2017).

1.3. Problem statement: ESA in an emerging economy

The adoption of environmental strategies includes a set of environmental goals and plans to prevent negative environmental impacts (Ates, M.A. et al, 2012). Since the 90's, companies began to develop environmental strategies to face unregulated issues. These strategies used technological innovation as an operational leverage to deal with the environmental interface and ended up achieving a competitive advantage before competitors by serving an increasingly observant and conscious markets for sustainability aspects (E. Annunziata, T. Pucci, M. Frey, 2018).

“Environmental strategies involve the development of resources, capabilities and green competencies that cannot be easily imitated by the market and provide superior competitiveness for firms” (Buisse & Verbeke, 2003; Christmann, 2000; Darnall et al., 2010). The adoption environmental strategies include practices toward products, processes and systems. These practices include technological innovations as well as novel approaches such as green products (i.e. eco-design), green processes (i.e. eco-efficiency) and green systems design (i.e. green production and consumption systems and development of green capabilities in collaborative networks).

In terms of the environmental needs of the contemporary world, just as important as knowing what determines compliance is to know what determines companies to go beyond compliance with the law, since the factors that stimulate or allow companies to go beyond compliance could be modulated to promote general ESA. Socially proactive behavior on the part of companies is certainly desirable, since it reduces the need to enforce compliant-behavior, thus bringing down the overall transaction costs of society and improving its social, economic and environmental efficiency. Furthermore, a firm with the adoption of environmental strategies can put together its capabilities in an efficient way in order to reduce its environmental impact and possibly improve its performance and competitive advantage (Dai et al., 2018).

However, the benefits to a firm of an Environmental Strategies Adoption (ESA) are less clear in emerging economies, where environmental regulations may be lacking or poorly enforced and demand for greener products may be virtually nonexistent (Blackman, 2010). Interestingly, the existence of weak regulations or institutions could mean, for example, that in emerging economies the actions of managers with a societal perspective or the existence of dynamic business models toward market exports may constitute key factors for ESA (i.e. green products). Understanding the influencing factors and types of ESA in emerging markets is critical for business managers and policymakers, so they are

able to employ evidence-based practices in order to implement additional strategies and develop useful policies (Earnhardt, 2014). *Hence, the adoption of environmental strategies, which has been scarcely explored in emerging economies, constitutes the framing concern of the present work.*

Considerable research has been conducted on the factors that determine the adoption of environmental strategies on the part of companies. ESA has been explained from different theoretical perspectives, mainly, *Institutional Theory* (Christmann & Taylor, 2001; Sayed et al., 2017; Zhu et al., 2013), *Resource Based View* (Lüdeke-Freund & Dembek, 2017; Sharma et al., 2007; Ulrich & Lake, 1991), *Corporate Social Responsibility* (Schwartz M & Carroll A, 2003; Svensson & Wood, 2008; Bansal, 2000; Nakamura, 2001) and *Cognitive frames* (Hahn et al., 2014; Hemingway & Maclagan, 2004; Wang & Dou, 2012) which allow three groups of ESA factors to be considered, namely Business context, Business models and Manager's perspective.

These groups of factors can be listed as follows. The main business context factors identified by the institutional theory come from three different sources, explicitly coercive (i.e., legal regulation and the influence of communities and NGOs) normative (green markets and organizational fields for the adoption of environmental standardizations such as ISO 14001), and mimetic (competitors and parent companies' best practices) (Christmann & Taylor, 2001; A. J. Hoffman, 2001; Jennings & Zandbergen, 1995; Zhu, Cordeiro, & Sarkis, 2013). In turn, the Resource Based View has identified three types of business models affecting ESA: Stable (focused on maintaining their market portion), Dynamic (aimed at increasing current market portion) and Transformative (seeking to create new markets and ways to address societal needs) (Boons, 2009). Finally, Corporate Social Responsibility in alignment with the concept of Cognitive Frames has established that the manager's perspective can be oriented towards: Compliance (focused on fulfilling the law and cultural expectations), Profits and basic social rules, and a Societal Responsibility (social innovation in addition to market and efficiency gains) (Carroll, 1991; Loe et al., 2000).

A synthetic approach to these theoretical perspectives has allowed the author to develop a theoretical model that incorporates their corresponding ESA factors into a unified overview, since they could integrate for the adoption of environmental strategies (See Chapter 2. Literature review and theoretical model). As one of the central contributions of the present work, this model is not only a useful guiding research tool, but also a decision making one, since it can perform as a central scorecard for policy makers and company managers.

Author proposes as a general hypothesis that business context, business models and manager's perspective influence the adoption of environmental strategies. Thus, a co-occurrence configuration is highlighted between specific ESA factors and environmental strategies such as green processes (focused on the improvement of operational efficiencies), green products (focused on improvement or development of the environmental attributes of a product in order to achieve a better position in green markets) and green systems design (focused on the development of green or social product-service systems in order to create new markets).

Evaluating these co-occurrence configurations between influencing factors and ESA, in Colombian big firms, constituted the general objective of the present work.

1.4. Research questions

The leading question of the present investigation is: *What are the factors that drive Colombian big firms to adopt environmental strategies?*

Two sub-questions were used to probe more deeply into the joint domain:

- *Why do Colombian firms adopt environmental strategies?*
- *How do Colombian firms adopt environmental strategies?*

1.5. Research methods

ESA and ESA factors were studied through a qualitative approach, that allowed the researcher to access a diversity of key, non-quantifiable factors through interviews or analysis of pertinent documents. In effect, the richness, variety and diversity of information provided by these sources made it necessary to allow an interpretative process focused on the assessment of the phenomenon in its natural context.

For case selection, it was necessary to identify a number of purported “green” companies to conduct research on. In the second place, ESA factors and resulting environmental strategies had to cover the ranges² reported by the literature for these two parameters, so that they could be, later on, tested for co-occurrence (the main specific objective of this work). Thus, *the characterization of ESA and ESA factors independently from one another in “green” Colombian big firms constituted the secondary specific objective of this research*³.

Since the above mentioned characteristics of the firms could not be foretold in advance, a series of case studies were chosen through purposive, theory-driven sampling, in order to fulfill the specific objectives of this work. With this intention, three sets of criteria were taken into consideration. Firstly, those company characteristics that would most likely lead to selecting “green” firms were defined *a priori* to select the sample. Secondly, the sample was checked for the presence of ESA factors reported by the literature: contexts, business models and manager’s perspective. Thirdly, since the sample had to include different environmental strategies (i.e. green products and green processes), a second set of criteria was applied to it *a posteriori* (after its analysis) to discriminate between them and make sure distinctive environmental strategies were included in the sample.

Purported “green” companies were selected according to the following criteria: (i) being listed in the Dow Jones Sustainability index or (ii) having clear public recognition in the sense of a sustainable performance (e.g. adoption of ISO 14001 certification, subscription to Global Compact principles, or (iii) being reported by Merco among the best reputed Colombian companies for their sustainable performance).

² i.e., societal oriented, green products, and cleaner production strategies; and ESA factors covering the above mentioned business contexts (i.e. regulation, green markets and standards), models (stable, dynamic and transformative) and manager’s perspectives (compliance, profit and citizenship).

³ Nonetheless, it had to be tackled first, since its resulting data were the input for the main specific objective.

The presence of ESA factors was checked in three aspects: business context (i.e. regulation, green markets or standards), business model (i.e. stable, dynamic and transformative) and manager's perspective. (i.e. compliance, profits or citizenship perspective). The cases that were likely to match these different criteria were chosen from different industrial sectors that are recognized in the literature as being specifically influenced by such factors. For example, international trade intensity influences ESA (Christmann & Taylor, 2001; Muller & Kolk, 2008) and also institutional pressure differs by industry, because of the nature of operations and the exposure to public awareness. (Berardi & de Brito, 2015)

- Companies that were likely featured by coercive sources at business context were selected from highly regulated sectors such as extractive industries and commodities. For example, at extractive sector, the public perception of its ecological impact imposes the need for certain social and environmental licensing to operate associated to regulation and community pressure (Adelman, 1987). Furthermore, extractive industry is also characterized by low product differentiation and a high level of cohesion and interaction among enterprises, which mainly determines the implementation of stable business models (Bansal, 2000).
- Cases that were likely influenced by normative sources at business context were selected from sectors, focused in export and green markets that adopt rules, norms and procedures that fulfill requirements for sustainable food, products and services including companies that stood out for their innovation processes and promoted the development of new products according to either a dynamic (i.e. companies that exploit new opportunities in the market) or transformative business model (i.e. companies that create new markets).
- Firms that were likely featured by mimetic sources at business context were selected from companies under the influence of a green industry (i.e., competitors and parent companies or subsidiaries) that were particularly homogeneous both in the products they offered and in their environmental impacts (Simms, 1991).

Finally, as to the criteria employed to discriminate across environmental strategies *a posteriori* (*after its analysis*), a typology of environmental strategies was defined, ranging from compliance focus to green systems design (Petulla, 1987; Boons, 2009; and Porter, 2011). The sample was checked for strategies related to compliance (i.e. environmental permits, social & environmental plans legally binding and pollution control) (Martínez de Anguita, et al, 2008), green processes (i.e. cleaner processes) (Boons, 2009; Porter & Van der Linde, 1995) and green products design (i.e. eco-design) (Porter & Kramer, 2006), plus those commonly known as green systems design (i.e. production and consumption systems and development of capabilities in collaborative networks) (Porter & Kramer, 2011; Van Hoof & Thiell, 2015).

The assessment of ESA factors and observed environmental strategies was carried out through semi-structured and in-depth interviews with company sustainability officers and

industry representatives, coupled to the study of public documents (e.g. sustainability reports and newspapers) on which a qualitative analysis allowed identifying the factors and strategies of each one of the studied companies.

1.6. Relevance

While previous research studies separately examine the influence of context, business model and manager's perspective on ESA, the question on how ESA factors, through a unified overview, influence the adoption of environmental strategies had been left aside. Thus, the main contributions of the present work are the development of an ESA theoretical model and its preliminary empirical testing through seven case studies in Colombian big firms. Theoretical model allows researchers to understand the existing tensions between multiple influencing factors for the adoption of strategies.

Currently, managers lack of a framework for deciding which environmental strategies (i.e. greener products or greener processes) are best for their particular company's context. The proposed model can help managers understand the nature of environmentally responsible behavior demand or interest. Thus, the theoretical model is not only a useful guiding research tool, but also a decision making one, since it can perform as a central scorecard for policy makers and company managers.

The present findings also contribute to policy development when it comes to stimulating ESA, since they are useful to promote the conditions that stimulate the adoption of environmental strategies. For example, research has established the effect of voluntary programs and green financing in the dissemination of greener processes (i.e. cleaner production) and green products strategies in large Colombian firms.

Additionally, both ESA and ESA factors have been characterized in the studied cases, highlighting the fact that they pertain to an emergent economy.

1.7. Scope and limitations

At this point, it is worthwhile noting that the limitations of this research constitute an opportunity for future works. The purported interaction between influencing factors for environmental strategies adoption provides a very interesting and potentially fruitful research perspective for the future. Any further testing of the proposed model will help to refine the conveyance between different influencing factors and environmental strategies modalities. In a more general sense, findings were applied in the Colombian context and the participating cases and the qualitative nature of the present study calls for a larger scale analysis of the same phenomenon in additional latitudes.

Besides, it would be interesting to conduct further studies on small and medium sized companies in the third world. The application of the conceptual model in SMEs is useful for establishing their current environmental strategies and the contextual factors that have facilitated or impeded their transit toward environmental strategies adoption.

1.8. Content

The structure of the manuscript is as follows. Section 2 presents a literature review to identify relevant studies about environmental strategies adoption and the main theories about the corresponding factors. A framework for the adoption of environmental strategies is also presented in section 2. The research design and methods are specified in section 3. Section 4 presents the case studies. The analysis of results is presented in section 5, discussion is exhibited in section 6 and conclusions, contributions and recommendations for future research is presented in section 7.

2. Literature review and theoretical model

This chapter presents a review of the academic literature published on the core topic of the current dissertation: The adoption of environmental strategies. To do so, peer reviewed journals in the field of environmental management were consulted. A content analysis of the existing literature is presented, in conjunction with trending theories and concepts about Environmental Strategies Adoption (ESA) and its influencing factors. The end of this chapter presents the environmental management literature regarding ESA in Latin America. This literature review shaped the ideas of this author to propose the theoretical model explained in section 2.3.

2.1. Field of study

The current literature review focused on the analysis of the contributions of previous works related to the research subject in terms of not only theories and concepts that explain the adoption of environmental strategies, but also empirical works on the topic. Literature search engines such as ISI – Web of Knowledge, Proquest and Scopus were employed to identify the relevant literature about the research subject. Only articles published in English in peer-reviewed journals were considered. The initial criteria used in the search engines corresponded to the following key words: Environmental strategies adoption, sustainability, green practices, developing countries, emerging economies, Corporate Social Responsibility (CSR), influencing factors and motivations.

Results of the query resulted in wide responses and some of them not related to the main theme but related to the psychology and medicine field due to the fact that the words “motivations” and “factors” are used in such knowledge domains. Author then, performed an iterative process, limiting the search to the environmental management field by narrowing the key words to adoption, environmental strategy and business and using the following equation: ((adoption OR implementation OR adaptive) AND ("environmental strategies" OR "environmental strategy") OR ("green practices") OR "environmental management" OR ("ecological responsibility") OR "social responsibility" OR (CSR)) AND (corporat* OR company OR firm OR business)).

By using the abovementioned query, results from search engines were much closer to the environmental strategies adoption topic than the initial search. In order to identify the main influencing factors for the adoption processes and prevent getting search responses not related to this topic, researcher proceeded to search within the results which articles made reference in the abstract to the use of “sustainability” and (“institutionalization” or “business models” or “manager perspectives”) which were observed as the most appropriated approaches in RBV, Institutional theory and CSR to understand or explain the adoption of environmental strategies.

Eligible full papers were reviewed and evaluated depending on whether or not they fulfilled inclusion criteria above mentioned. Finally, search resulted in a set of 375 articles after removing articles from Medicine, Health professions and Veterinary fields.

In analyzing these studies over time, it could be observed that there is an increasing interest on ESA. The topic moved from a reactive position back in the early 70’s to a more proactive position in the early 90’s. According to Berry and Rondinelly (1998), in

the early 70's, firms were not prepared to adopt compliant environmental strategies. Furthermore, Friedman (1970) exposes that firms were only required to maximize profits.

Taking that information into account, the current scan started from the moment of the publication of the pivotal works of Schwartz (1977) and Carroll (1979) on *Corporate Social Responsibility*, which utter that there is an additional responsibility of firms toward society and its regulators, in addition to their formerly "unique" responsibility toward shareholders. Beginning in the 80's the concept of CSR was widened with the focus of strategic CSR, according to which firms are influenced by different stakeholders (i.e. consumers, media and interest) to engage in CSR and used it as leverage to achieve a competitive advantage (Drucker, 1984).

In addition to CSR, the literature reports the analysis of ESA from the perspective of the *Institutional theory* (IT), according to different influencing factors such as regulators, constituents and public opinion (Meyer & Rowan, 1977; Zucker, 1977). Resulting from IT, the literature of the early 80's shows how green institutionalism has occurred in response to three different pressures, namely coercive, normative and mimetic (DiMaggio & Powell, 1983).

The *Resource Based View* (RBV) of the firm appeared in the 1990's through several influential works which, in turn, were based on a series of pioneering investigations: Cyert & March (1963) and Penrose (1959) dealt with the management of firm assets as a source of heterogeneity, while Andrews (1971) analyzed how corporate strategy was supported on the strengths and weaknesses of the firm. The RBV approach was expanded by different authors who proposed the *Natural Resource Based View*, which asserts that environmental capabilities support the competitive advantage of the firm through product stewardship and sustainability (Hart, 1995). This approach describes how "environmental strategies lead to the development of unique competitively valuable organizational capabilities" (Sharma & Vredenburg, 1998).

In the mid 90's, Jennings & Zandbergen (1995) explained how external influencing factors such as stakeholder pressures could lead firms to adopt similar environmental strategies. Besides, Hoffman (2001) expressed that "firms within the industry present alike behaviors in their environmental strategies". This same author utters that ESA factors fall into the following categories: International trade, market (consumers, associations, competitors, consultants), resource drivers (e.g. buyers, insurance companies, banks and suppliers) and social drivers (e.g. communities, NGO's, press and academia). Finally, Christmann & Taylor (2001) establish that ESA-beyond-compliance factors also include environmental standardization.

Additionally, in the early 2000's it appears a stream of research regarding the voluntary behavior of companies. For example, Vogel (2006) describes CSR in relation to the improvement of the workplace and the benefits toward society through environmental strategies that go beyond compliance.

Different authors have combined the Institutional Theory and the RBV, which has allowed observing instrumental motivations such as reputational benefits to achieve legitimacy (Porter & Kramer, 2006), economic benefits associated to the achievement of higher competitiveness (Aragón-Correa et al., 2008), normative motivations such as

corporate citizenship (Loe et al., 2000; Van Marrewijk, 2003), and personal values and moral motivations (Jamali & Mirshak, 2007). Later on, some authors analyzed constant community pressure on firms and the ongoing approval within local communities, which has led firms to improve their environmental performance (Earnhart, 2017).

A peak in publications was observed between 2010 and 2013, after which they stabilized around 2017 (see Figure 1) and have remained steady ever since. In the last decade, ESA has been found to be influenced by corporate governance (Ortiz-de-Mandojana et al., 2016), manager’s personal attributes (C. H. Lee et al., 2013), institutional logics, business models and behavioral intentions (Raab et al., 2018).

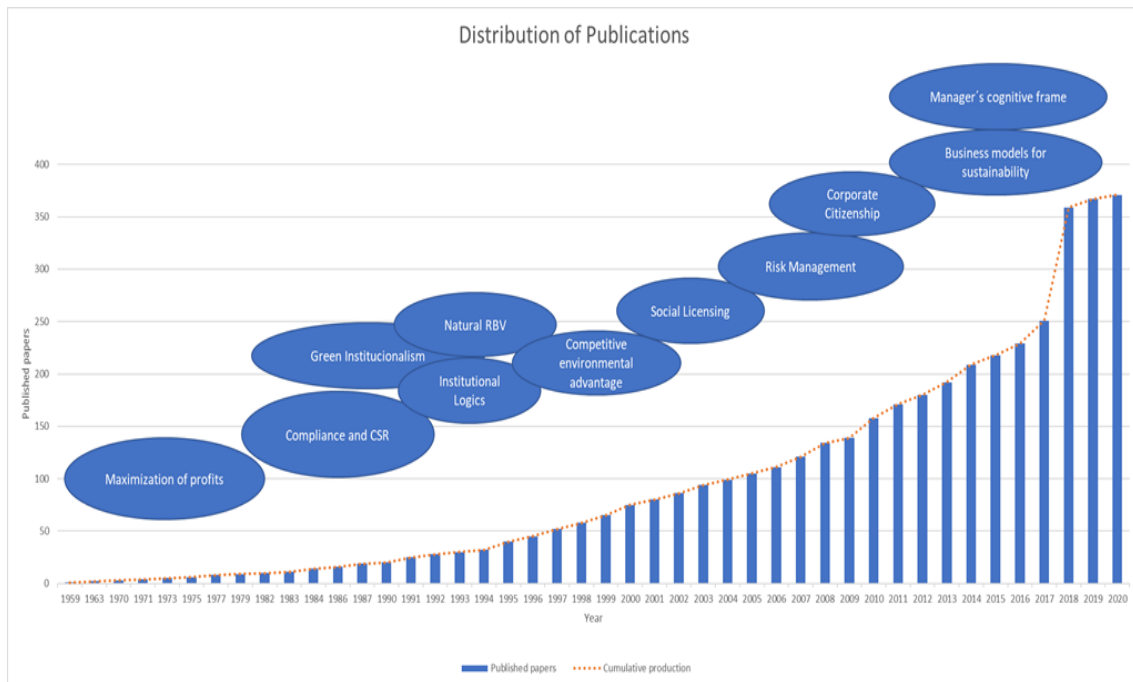


Figure 1 Distribution of publications over time.

Most of the articles were published in Journals related to sustainability management such as The Journal of Cleaner Production, Sustainability and Business Strategy and The Environment. An important group of articles were also published in journals of business management such as The Strategic Management Journal and The Academy of Management. Finally, a group of articles were published in journals related to ethical and social issues such as the Journal of Business Ethics (See Figure 2 Distribution of articles in Journals).

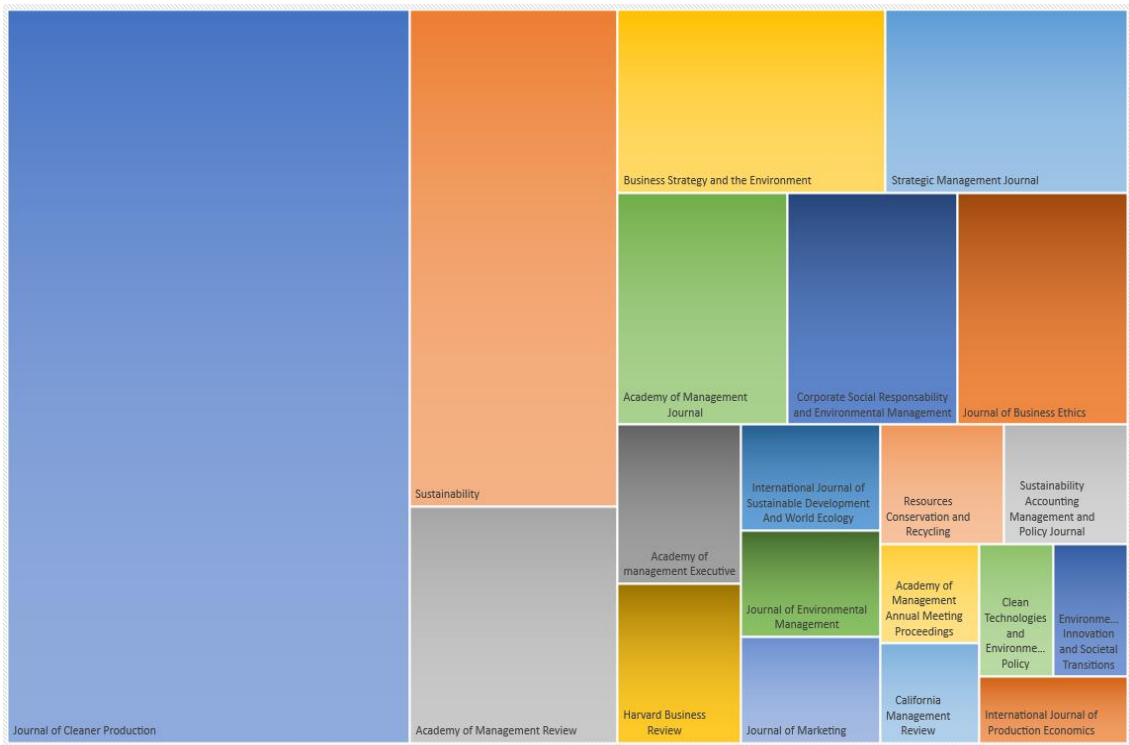


Figure 2 Distribution of articles in Journals.

Finally, with regard to the linkages among ESA-related subjects, three main clusters of *keywords*, extracted from the studied articles, were found in the present review⁴ (See Figure 3. Co-word patterns among reviewed articles).

⁴ “Co-word analysis is a content analysis technique that uses patterns of co-occurrence of pairs of items (i.e., words or noun phrases) in a corpus of texts to identify the relationships between ideas within the subject areas presented in these texts” (He, Q., 1999). Knowledge Discovery Through Co-Word Analysis. *Library Trends*, 48(1), 133–159.



Figure 4 Distribution of ESA articles around the world.

Europe and North America have dominated scientific research since the 20th Century, but new players are coming to the scene (Adams, 2012). Co-authorship patterns (Figure 5) show the continuous development of research networks across institutions and emerging countries, which could accelerate a shift in the global research landscape to achieve a more balanced global research work. For example, the data show the existence of international research networks between North America and emerging researchers in Southeast Asia and Latin America. An important collaborative network between researchers from the UK and those from the Euro Zone was also observed. Additionally, co-authorship reveals the existence of both international networks between Spanish and US researchers and regional networks in North America and Europe. As a consequence, the existence of regional networks has played a vital role in the building of research capacity regarding sustainability management.

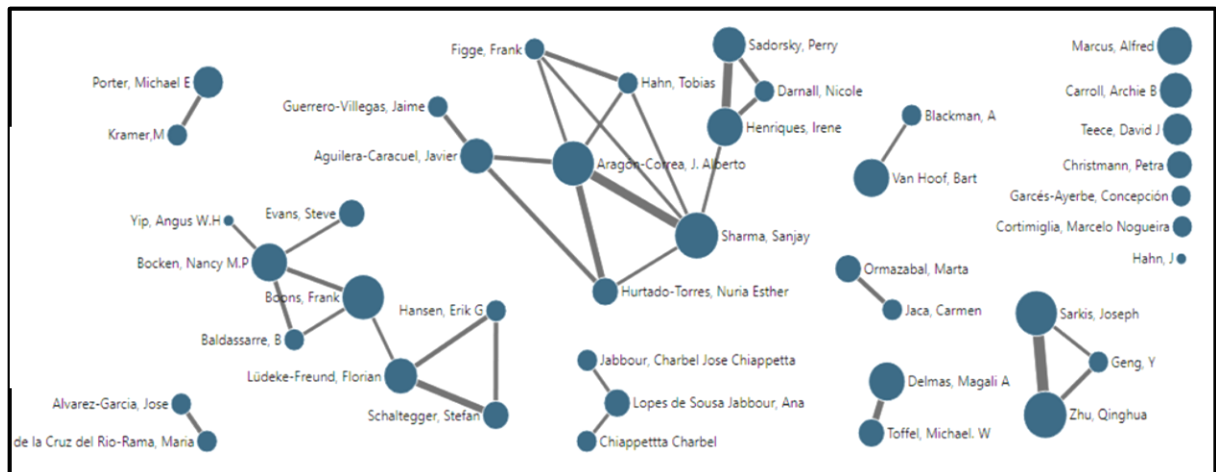


Figure 5 Collaborative networks of ESA research.

Note: Calculations for graphic elaboration supported by Vantage Point software at Universidad Javeriana.

- *Interpreting the findings*

This first scan of the literature allowed the author to identify the main theories that support the explanations of ESA and its influencing factors (See sections 2.2, 2.3 and 2.4). Additionally, empirical and theoretical gaps in the environmental management field in emerging economies are presented in section 2.5.

2.2. ESA definition and typologies

Environmental strategy adoption can be defined according to different perspectives, depending on the standpoint of the research paradigm (e.g., greening strategy, corporate sustainability, competitiveness or CSR).

- From the perspective of the *greening strategy*, an environmental strategy adoption is defined as a progressive reduction of negative social and environmental impacts (Sharma, 2014).
- According to the *corporate sustainability* perspective, environmental strategy adoption is defined as a set of actions that enables the firm to achieve a positive economic, social and environmental performance (Sharma, 2014).
- According to the *competitive perspective*, an environmental strategy adoption is defined as “the integration of environmental protection into baseline concerns for economic growth as an issue of risk management, capital acquisition and consumer demands” (A. Hoffman, 2000). Under the competitive perspective, it has been included the research stream about sustainable business models which refers to the integration of sustainability objectives into business models for achieving profit and a positive impact on the environment (Schaltegger et al., 2016).
- Finally, according to the *CSR* perspective, environmental strategy adoption can be defined as the responsibility of the firm with its stakeholders, indicating that companies are “responsible for the needs of society”, extending beyond economic and legal obligations (Van Marrewijk, 2003).

The Greening strategy perspective focuses on the interaction between firms and the environment, presenting the firm as a source of negative impacts on society. This concept includes a variety of possible actions such as pollution prevention and waste treatment (Earnhart, 2017).

From a complementary perspective to the greening strategy, corporate sustainability and CSR position the interaction between firms and the environment as a way to reap positive impacts for both the firm and society. Corporate sustainability includes the adoption of practices such as environmental management systems and reflects internal policies, procedures and follow-up indicators.

Finally, the concept of competitive environmental strategy is defined as not external to the firm, but integrated into the business model (Earnhart, 2017). Examples of practices under the competitive strategy correspond to greener processes (i.e. cleaner production and energy efficiency programs), all of which improve company efficiency and reduce pollution (OECD, 1999). Along with the concept of competitive strategy emerges a stream of research known as sustainable business models which refers to a value

proposition that allows multiple-stakeholder shared value creation by addressing sustainability issues through the development of green solutions such as sustainable products and green packaging (Baldassarre et al., 2017; Bocken, et al. , 2014).

On these grounds, and for this research, an environmental strategy is defined as *the set of actions that a firm performs to obtain greener solutions for the management of its environmental issues*. “Environmental strategies, then, involve for some firms the development of resources, capabilities and green competencies that cannot be easily imitated by the market and provide superior competitiveness for firms “ (Darnall et al., 2010)). Rationale for the early adoption of environmental strategies holds a profits manager’s perspective that is absent in current debates surrounding institutional logics (Bhimani et al., 2016). “This basically means that early ESA for anticipating, planning and initiating is more practical and less costly than simply reacting to regulation or social problems once they have surfaced” (Carroll & Buchholtz, 2012).

In addition to the multiple environmental strategy definitions, different trends of research use specific criteria to classify environmental strategies according to the following typologies: value creation, business model innovation, risk management and response time of firms.

2.2.1. ESA typology according to value creation

Value has been defined as “outcomes relative to costs” (Porter, 2010). According to the value creation perspective, there are three different types of environmental strategies to achieve a competitive position: the pollution-reduction, reputation and shared-value oriented strategies (Porter & Kramer, 2006, 2011; Porter & Van der Linde, 1995; Van-Hoof & Fuquene-Retamoso, 2012).

The pollution-reduction oriented strategy seeks to add value by reducing operational costs through process innovation, while improving environmental performance (Porter & Van der Linde, 1995). They include practices such as cleaner production, product stewardship and recycling (Baas, 2007; Hart, 1995).

The reputation-oriented strategy seeks to add value by improving a company’s image and the strength of its brand and organizational culture by obtaining an increase in the value of the company through market stocks (Porter & Kramer, 2006). Including initiatives such as green product differentiation, these strategies focus on environmentally sensitive consumers (Miles & Covin, 2000) or social initiatives as a sort of insurance to mitigate criticism in case of a crisis (Porter & Kramer, 2006).

The shared-value strategy seeks to add value by improving the social and economic conditions in the places where firms operate (Porter & Kramer, 2011) and making social changes (Boons, 2009). The value proposition, then, must provide ecological, social and economic value through the offering of sustainable products and services under a business model that distribute economic costs and benefits equitably among actors involved extending the notion of value creation by questioning traditional definitions of value (Boons & Lüdeke-Freund, 2013). Here, there are found strategies such as the development of green capabilities along the supply chain (Porter & Kramer, 2011; Van Hoof & Thiell, 2014) and the development of collaborative networks that include customers in addition to suppliers (Boons, 2009; Porter & Kramer, 2011).

2.2.2. ESA typology according to business model innovation

According to (Schaltegger et al., 2012), there are three types of environmental strategies in relation to business model innovation for sustainability: the defensive, accommodative and proactive.

Defensive strategies are related to a pattern of actions implemented to protect current business models focusing on risk and cost reduction and often driven by the need for compliance; accommodative strategies (improvement, integration) are associated to strategies that include some environmental or social objectives (e.g. environmental protection) by considering modifications of internal processes and finally, proactive strategies (full integration) refers to the redesign of the core business logic of the firm for sustainable development.

2.2.3. ESA typology according to risk management.

According to Petulla (1987), there are three different types of risk management environmental strategies: The crisis, cost, and enlightening-oriented strategies.

The crisis-oriented strategy seeks to avoid regulation, the firm only responding when a crisis starts (Petulla, 1987). The response to environmental issues is characterized, then, by either denial or the “fire-fighting” method (Boons, 2009). In this type of strategy, firms do not deploy resources for the management of their environmental issues, but for the handling of crises.

The cost-oriented strategy is associated to specific actions intended to comply with regulations. In it, environmental issues are assumed as an economic burden (Petulla, 1987). The response to environmental issues is characterized by the implementation of pollution control technologies according to law enforcement (Boons, 2009).

The “enlightening-oriented” strategy involves achieving the sustainability of the company by long-term actions and avoiding liability suits through the adoption of cost-effective solutions to go beyond compliance (Petulla, 1987). In this case, the response to environmental issues is characterized by the implementation of pollution prevention approaches related to resource management efficiency (Boons, 2009).

2.2.4. ESA typology according to the response time of firms

According to environmental management literature, there are four different types of environmental strategies in relation to the response time of firms: 1) defensive strategies (fight all the way), followed by 2) reactive strategies (do only what is required), 3) accommodative strategies (be progressive) and, finally, 4) proactive strategies (lead the industry) (Carroll, 1999).

Defensive strategies are assumed by firms when the environmental issues are central to achieve a competitive advantage but firms do not have the capabilities required to address the environmental issues and take defensive position before their stakeholders (Stanwick, 2020).

Reactive strategies occur when organizations meet government policies to avoid punishment (Miles, 2000). This type of strategy corresponds to the implementation of pollution controls and “end of pipe” techniques (Aragon, 2008). In this case, firms see emission controls as a cost (Henriques & Sadorsky, 1996). Miles also suggests that this type of strategy is often implemented in commodity-based businesses (Miles & Covin, 2000).

Accommodative strategies are deployed when firms do not consider that environmental issues are critically important but have the resources to manage those issues and improve their environmental performance (Stanwick, 2020).

Proactive strategies are part of a systematic plan for developing long-term environmental activities in a company (Cater, 2009). Certain preventive strategies include green culture development and business process improvements to reduce environmental impacts as well as the reduction of resources used in the manufacturing of products and the transfer of environmental practices to suppliers and other stakeholders (Cater, 2006); (Aragon-Correa, 2008).

Carroll (1999) proposes a broader continuum than Aragon’s (2008) classification of firm responsiveness, starting with 1) defensive strategies (fight all the way), followed by 2) reactive strategies (do only what is required), 3) accommodative strategies (be progressive) and, finally, 4) proactive strategies (lead the industry) (Carroll, 1979, 1999).

2.3. ESA typology employed for this research

Based on Petulla (1987), Boons (2009) and Porter (2011), a typology of environmental strategies was arranged in order to be used for this research (Table 1). This typology can be broadly categorized as oriented towards compliance, green processes, green product development and green systems design (See Table 5).

Table 1. Features of environmental strategies.

Strategies:	Compliance	Green processes	Green product development	Green systems design
Strategy Focus	Risk and pollution control	Process improvement	Product innovation	Societal needs
Rationality	Compliance	Normative	Create economic and ecological value	Create ecological and social value
Drivers	Regulation	Costs efficiency and industry standards	Current Market	Creation of new markets
Scope	Company	Company	Company and value chain	Company, competitors and stakeholders

Strategies:	Compliance	Green processes	Green product development	Green systems design
Operational focus	Costs control	Increase efficiency	Increase market positioning	Increase accumulated value
Management involvement	Gradual and transactional involvement. Environmental issues are only dealt with when necessary	Environmental issues are assumed as an opportunity to achieve efficiency	Top manager provides support and is involved in environmental issues according to a business case perspective.	Visionary leaders who inspire cultural change for a sustainability mindset among employees.
Capabilities	Business efficiency	Operational efficiency	Design of products for new markets	Design of systems and creation of the conditions for new markets
Environmental practices	Technological know-how	Optimization of operations	R&D	Collaborative R&D
	Lobbying activities Mitigation End of pipe Social campaigns Social projects Reputation management Biodiversity conservation	Collaborative standardization Cleaner production	Eco-design Green financing	New and sustainable production and consumption systems, capability development at partners and communities, inclusive businesses

Compliance strategy seeks to fulfill the law and achieve social license to fit with the paradigm of punishment avoidance (Miles, 2000) and of environmental protection (Boons, 2009). In this type of strategy, environmental issues are assumed as an economic burden (Petulla, 1987) and firms deploy resources through policy, NGO's and lawyers for the management of their environmental issues. Examples of compliance strategies include environmental licensing plans, end-of-pipe or pollution control technologies, substitution of restricted materials, lobbying activities as a defensive practice, recovery of affected ecosystems and reward of communities in exchange for environmental impacts and reputation improvement (Boons (2009); Petulla (1987) and Henriques (1999)).

The green processes strategy seeks to become more efficient in both resource consumption and waste generation, thus diminishing operational costs and reducing environmental impacts (Boons, 2009; Porter & Van der Linde, 1995). In this type of

strategy, environmental issues are assumed as an opportunity for saving costs or increasing profits, and firms deploy resources through innovations and research centers to optimize operations.

Green product development is the strategy that seeks to improve the reputation of the company's products by highlighting their environmental attributes in order to position the firm and capture a better portion of the market (Porter & Kramer, 2006). In this type of strategy, environmental issues are assumed as a market opportunity and firms deploy resources through marketing agencies, sales and customer service departments to position their brand.

Finally, the green systems design strategy seeks to capture economic value by fulfilling societal needs through the development of green or social product-service systems and the development of capabilities in collaborative networks, within a win-win relationship between society and the business (Boons, 2009; Porter & Kramer, 2011). In this type of strategy, environmental issues are assumed as an opportunity to generate social benefits and firms deploy resources through their customer, supplier, competitor and stakeholder networks to create new markets. This type of strategy constitutes a means to overcome the technology bias of traditional processes and product innovation approaches and move towards system-level innovations that are integral to collaborative networks (Tukker, 2015) to achieve industrial symbiosis and circular economies, within a win-win relationship between society and the business (Boons, 2009; Porter & Kramer, 2011).

The interest in the adoption of environmental strategies (i.e. green processes, green product development or green system design projects) relies on understanding why some firms address environmental issues through the development of practices and innovations in addition to those required by law in an emerging economy.

Table 2. Typology of environmental strategies used in this research.

Environmental Strategy	Characteristics	Examples	References
Compliance	<ul style="list-style-type: none"> *Environmental strategies are performed to fulfill the law. *Environmental issues are assumed as an economic burden. * There is gradual involvement of top management in environmental issues. *Environmental issues are only dealt with when necessary. 	End of pipe technologies, pollution control, impact mitigation, material substitution restricted by law, lobbying activities and environmental litigation.	Boons (2009); Petulla (1987); Hart (1995); Shrivastava (1995) and Henriques (1999).
Green processes	<ul style="list-style-type: none"> *Environmental strategies are performed to reduce operational costs through process innovation, while improving environmental performance. 	Cleaner production, product stewardship and recycling	Porter (1995); Henriques (1999) and Hart (1995).

Environmental Strategy	Characteristics	Examples	References
	<p>*Environmental issues are assumed as an opportunity to achieve efficiency in the consumption and use of resources.</p> <p>*There is some involvement of top management in environmental issues.</p> <p>*Internal reporting, but little external reporting occurs.</p> <p>*Environmental issues are constantly handled.</p>		
Green products development	<p>*Environmental strategies are performed as a business function.</p> <p>*Environmental management is seen as an opportunity to improve the company's image.</p> <p>*Top management provides support and is involved in environmental issues.</p>	Green product differentiation by the use of truthful advertising, internal and external reporting and environmental and social responsibility.	Henriques (1999); Porter and Kramer (2006); Boons (2009); Miles and Covin (2000).
Green systems design	<p>*Environmental strategies are performed as a future business function.</p> <p>*Environmental management is seen as an opportunity to improve the social and economic conditions where firms operate, in order to make social changes.</p> <p>* There is internal and external reporting.</p> <p>*Top management supports and is involved in environmental or social issues.</p>	Creation of new production and consumption systems and development of capabilities in collaborative networks (i.e. industry, supply chain, communities, etc.).	Porter and Kramer, 2011; Boons (2009); Henriques (1999)

2.4. ESA Factors

Research on ESA factors has resorted to different theoretical concepts as lenses to understand ESA. It can be said that such theories explain how firms adopt environmental strategies as a way to deal with uncertainty, achieve a competitive advantage or address societal needs. Specifically, the *Institutional Theory* has been used to explain how

external and stakeholder pressures can lead firms to adopt similar environmental strategies as a way to seek legitimacy (M. Delmas & Toffel, 2004; Sarkis, 2003). *Resource Based View (RBV)* has been used to explain how firms adopt different environmental strategies by using their business models and capabilities in order to achieve environmental and economic benefits. Finally, *CSR* in alignment with the concept of Cognitive Frames has been used to illustrate the role of managers in ESA. Relying on these theoretical perspectives, the ESA influencing factors analyzed in the present research are, respectively, business context, business model and manager’s perspective (See Table 3. Co-occurrence configuration of ESA Factors).

Table 3 Co-occurrence configuration of ESA Factors

Strategies Factors	Compliance	Green processes	Green products development	Green systems	References
Business context	Regulation Social license	Green industry Parent company	Green markets	Community Green markets	Hoffman, (2001) & Genc, (2013) Earnhart, (2017)
Business model	Stable	Stable	Dynamic	Transformative	Boons, (2009)
Manager’s perspective	Compliance	Profits	Profits	Citizenship	Carroll, (1999)

- Business context

Business context plays an important role in the adoption of strategies by firms, because of the external constraints and norms that institutions impose on corporations and that are translated into the technical attributes that drive the way companies operate” (Bhimani et al., 2016)). Multiple pressures such as performance rewards, pressure for conformity and social penalties combine as a driving force on the decisions and practices of firms (D’Andrade, 1984). Furthermore, “firms operate within a social framework of norms and values about what constitutes an appropriate behavior” (Oliver, 1997) as a way to gain legitimacy (Sayed et al., 2017).

Institutionalization emerges as a means to promote a norm within a social system such as the adoption of environmental strategies (Zhu et al., 2013). For example, in the case of export companies in emerging economies (Christmann & Taylor, 2001), institutionalization occurs according to the demands of foreign customers (Zhu & Sarkis, 2004), international laws and foreign competitor practices (Christmann & Taylor, 2001). Institutional pressure also occurs locally (Zhu et al., 2013) through national laws and regulations (Zhu et al., 2005), social license from communities (García-Rodríguez et al., 2013) and individual customer pressures (Henriques & Sadorsky, 2006).

The institutional pressures mentioned above occur through the influence of coercive, mimetic, and normative sources, as explained below (see Table 4: Characteristics of isomorphic sources):

- *Coercive sources* come from the pressures exerted on organizations by governments through regulation (Ying, 2010). Regulation is a major pressure for corporate decisions and a key factor for the adoption of environmental strategies (Ying, 2010). Regulation (or the threat it represents) drives the adoption of environmental strategies toward *compliance* (Earnhart, 2017). When there is coercive pressure to adopt a specific practice, firms are more likely to do it. Hendry & Vesilind (2005) state that “*sustainability at its simplest level is practiced to comply with the law*”. These authors also affirm that, under regulation, organizations meet environmental standards to avoid punishment.

(Abdelzaher & Abdelzaher, 2017) documented that the advance of environmental regulations in recent years have resulted in the standardization of environmental practices across supply chain. Nevertheless, literature on institutional theory have also found that institutional voids may facilitate supply chain corruption practices as a mechanism to by-pass sustainability standards. Furthermore, one strategy to overcome corruption practices could be related to perform “substantive and not symbolic adoption of environmental practices through collaboration and empowerment along the supply chain” (Silvestre et al., 2020).

In addition to regulations, social license is becoming increasingly important for guiding or stimulating adoption of environmental strategies due to the pressure exerted by local communities (Earnhart, 2017; Saleem & Gopinath, 2014) on the specific regions where firms operate (García-Rodríguez et al., 2013). Specifically, some researchers have found that organizations in specific business sectors with superior financial returns use available resources to implement environmental strategies in response to pressure from communities (Saleem & Gopinath, 2014). Additionally, Lee & Lounsbury (2015) examined how the “community logic, operationalized as differences in conservative and liberal political ideology, amplified or dampened the influences of state and market institutional logics in shaping firms’ toxic waste emissions” prevention and/or management practices.

Examples of this pressure occur in commodity-based businesses such as mining or the oil & gas industry. According to the World Bank, an increasing number of local communities are exerting pressure on firms, for them to clean up their impacts on ecosystems (Rooij, 2010). As a consequence, communities assume an important role in the control of companies located in distant zones where formal institutions of the State are basically absent (García-Rodríguez et al., 2013).

Cultural expectations and mass media add coercive pressures by reporting on firms with poor environmental performance (Bansal, 2005). Cultural expectations are taken as tacit rules for the proper environmental behavior of a company (Saleem & Gopinath, 2014). Examples of strategies driven by green coercive mechanisms include substitution of restricted materials and pollution control practices such as effluent and residue treatments (Martínez de Anguita, et al, 2008). In addition to coercive pressures, firms face pressures because of the uncertainties of the markets. In response to uncertainties, firms implement safety strategies by imitating practices used by others in their industrial sectors.

- *Mimetic sources* originate from successful competitors in the market, anchor companies in supply networks (Van Hoof & Thiel, 2014; Zhu & Geng, 2013) and parent companies (Zhu & Geng, 2013). The above mentioned sources play a role when organizations imitate other practices to learn new ways to increase their own success, resulting, for example, in sustainable purchase and customer cooperation practices (Zhu & Geng, 2013).

Mimetic pressures occur in organizations that share similar business contexts and resources, thus leading to parallel strategies (Haveman, 1993). Imitation includes environmental strategies and best practices implemented by successful competitors (Vejvar, et al, 2017) and headquarters as a way to increase business success (Zhu & Geng, 2013).

While uncertainties may constitute a driving force under mimetic isomorphism, organizational fields introduce the standardization of activities through normative pressures. Furthermore, supply networks have been used as channels to mobilize the adoption of environmental practices, mainly in economies where firms face weak institutions in their environment (Srivastava et al., 2021).

- *Normative sources* come from environmental standardization (Christmann & Taylor, 2002) across organizational fields and professional associations (Cyert & March, 1963). While the State acts as a coercive force, organizational fields introduce the standardization of activities through values and norms. Cyert and March (2004) have emphasized the normative dimension of decisions beyond diffusion sources exposed by other theorists. The emphasis on normative pressures introduces a prescriptive dimension into social life, together with a comparison of standardized structures and behaviors (Scott, 2008).

Normative pressure occurs when companies regulate themselves and go *beyond compliance* to adopt environmental strategies (Christmann & Taylor, 2002). Specifically, “current concerns about ecological issues have become so strong that firms are changing their practices to be more environmentally responsible” (Hendry & Vesilind, 2005). Furthermore, such pressures can also be exerted by” powerful customers that put pressure upon supplier organizations to comply with specific sustainability requirements” (Moxham & Kauppi, 2014; Tate et al., 2011). Eco-design is an example of strategies driven by normative pressures (Zhu & Liu, 2010) as well as the adoption of ISO 14001 (Delmas, 2009). Additional examples of environmental strategies driven by normative pressures include the implementation of CSR programs (Huimin & Ryan, 2011).

A summary of the characteristics of institutional pressures (e.g. coercive, mimetic and normative sources) in the adoption of environmental strategies, is presented in Table 4: Business context and Environmental Strategies.

Table 4. Business context and Environmental Strategies

Isomorphic pressures	Characteristics	Drivers	Environmental Strategies	References
Coercive sources	*There is pressure to conform to rules.	Environmental regulation in conjunction with social license, cultural expectations and mass media.	Material substitution restricted by law	D'Andrade, (1984). Hoffman, (1997) Earnhardt, (2017)
	*The firm is exposed to social penalties.		End of pipe solutions	
	*Regulation is the main driver.		Ecosystem restoration in exchange for firm's impacts	
Mimetic sources	*There is pressure to imitate other practices for achieving success.	Successful (international) competitors, supply networks and parent companies.	* Competitors' and parent companies' best practices	Zhu & Geng, (2013). DiMaggio, (1983). Vejvar, (2017)
	*The firm is exposed to lagging behind competitors.			
	*Uncertainty and novelty are the main drivers.			
Normative sources	* There is pressure for the standardization of activities.	Green markets, Organizational fields and professional associations.	* Eco-Design	Cyert & March, (1963). D'Andrade, (1984). Sarkis, (2011) Zhu & Liu, (2010)
	* The firm expects a performance reward.		* ISO 14001	
	* Values and norms from the business context constitute the main drivers.		* CSR programs	

Along with the concern about the practices and processes explaining “why” and “how” there has been increased interest in the co-occurrence configuration among influencing factors (Lawrence et al., 2011), which has led to an exposition of the consequences of multiple factors (i.e. contexts, business models and manager’s perspectives) on organizational decisions (Ocasio et al., 2018).

The institutional logics perspective is defined as a framework for analyzing the interrelationships among individuals, organizations, and institutions in social systems (Friedland R., 1991; Ocasio et al., 2018). Specifically, institutional logics are “the socially constructed historical patterns of cultural symbols and material practices, assumptions, values, and beliefs by which individuals produce and re-produce their material

subsistence, organize time and space, and provide meaning to their daily activity” ((Thornton & Ocasio, 1999).

Regardless of the occurrence of institutional pressures, some organizations have lower proclivity than others to be influenced by institutional forces. Specifically, the relative influence of institutional pressure on firm strategies depends on the [perceived] power of a particular stakeholder (Mitchell et al., 1997). The response to institutional pressures regarding ESA can vary according to the readiness of organizations (e.g. business models) and how manager’s perceive or interpret these pressures (e.g. cognitive frames and manager’s perspective toward ESA) (Sayed et al., 2017).

Research on ESA has also used RBV as a framework to analyze divergent ESA modes and firm responses to external pressures (Aguilera-Caracuel et al., 2011; Sarkis et al., 2010). According to the RBV, the type of environmental strategy adopted depends on business models and firm capabilities that conditions how firms perform actions and conduct practices (Ulrich & Lake, 1991). Additionally, RBV has been used in conjunction with Institutional Theory as a way of developing an integrated view to analyze how firms deploy strategies under the influence of business context and internal factors such as firm business models and firm capabilities (Del Río et al., 2016).

- Business models

The business models concept is defined as the way an enterprise works to create a value proposition to deliver and capture economic value from customers (Ovans, 2015). In that sense, a business model articulates how the company converts capabilities into value creation (Teece 2010), by grasping business opportunities and accessing new markets to achieve additional revenues (Bocken et al., 2014). Furthermore, a firm delivers value through mechanisms and interactions within the organization and with stakeholders (Johnson et al., 2008; Stähler, 2002). Summarizing, business model represents the organizational and financial ‘architecture’ of a business according to a collection of customers and their needs, the structure of costs and firm’s interaction with stakeholders (Teece, D. 2010).

A stream of business model literature is strategy oriented, meaning with that, it studies the focus of business models in market competition in order to achieve a competitive advantage (Teece, 2010). Market competition refers to the products that a firm define to sell and the market a that firm choose to attend (Boons, 2009). Business model, then, specifies transactions with customers and other stakeholders (Chesbrough & Rosenbloom, 2002; Zott et al., 2011) through the coordination of capabilities and of the organizational routines to deliver value (Globocnik et al., 2019). Furthermore, a business model represents the logic of firm’s capabilities with which the firm actually competes in the market. Therefore, the business model reflects the firm’s strategy to exchange value in the form of a structured system explaining how all capabilities are put together (Casadesus-Masanell & Ricart, 2010).

Literature shows that there is a blurred boundary between business model and business strategy. According to (Blank, 2013), “business strategy and business models are not distinguished but are fully integrated and developed together”. Even more, “the entire strategy-making process involves validating a predefined value proposition and selecting the best business model configuration to enable the deployment of firm’s strategy

(Cortimiglia et al., 2016). Furthermore, Boons, 2009, investigated how firms deliver value according to their strategic orientation, the coordination of firm’s routines and its definition of ecological value. Specifically, same author proposes how a business is run according to a stable, dynamic or transformative perspective:

- Firms that run businesses under a *stable* perspective seek to maintain their portion of the market by fighting back against competitors and improving their operational efficiencies.
- Firms that operate under a *dynamic* perspective look forward to increasing their portion of the market by developing new products and taking advantage of market opportunities with their current capabilities.
- Firms that operate under a *transformative* perspective create new markets by developing innovative ways to tackle the needs of society or proposing novel products and services.

In addition to the strategic orientation of the firm, Boons, 2009, states that environmental strategies constitute an extension of firms’ definition of ecological value which in turn is derived from the business model in relation to firm’s strategic orientation. Furthermore, Boons (2009) uses the typology of business strategic orientation to frame the environmental strategies of firms as is presented in Table 5.

Table 5 Business models and environmental strategies

Business Models	Characteristics	Environmental strategies	References
Stable	* Focus on maintaining their portion of the market and keeping the productive process as it is.	Pollution control, reputation management and lobbying activities.	Boons, (2009).
Dynamic	* Focus on increasing their portion of the market.	Green product development, process redesign, green buys and product stewardship.	Boons, (2009).
Transformative	*Focus on creating new markets intended to innovate the way they address the needs of society.	Green systems design, transition management.	Boons, (2009).

Business models concept has traditionally conceived value notion as “a unidirectional flow between businesses and customers in exchange for economic benefits” but in the course of time, there has been a shift in the perspective from business models in order to include a wide range of stakeholders (i.e. suppliers, community and employees in addition to customers and shareholders) for exchange of multidirectional value flows between businesses and stakeholders (Freudenreich et al., 2019). Furthermore, there has been an extension of the business model concept for including the creation of ecological and social value in addition to the traditional perspective about maximizing share-holder value (Lüdeke-Freund & Dembek, 2017; Yip & Bocken, 2018).

Within the category of business models, sustainability business models benefit the company and its stakeholders, in concert with nature and society (Boons & Lüdeke-Freund, 2013). Sustainable business models “capture economic value while maintaining or regenerating natural and social capital beyond its organizational boundaries”(Stefan Schaltegger et al., 2016), moving from value creation for customers to value creation with and for a wide range of stakeholders (i.e. NGOs, authorities, suppliers and communities) (Freudenreich et al., 2019). Furthermore, business model shift is about the implementation of alternative paradigms beyond the neoclassical economic worldview to change the way of doing business towards sustainability (Boons & Lüdeke-Freund, 2013).

Business models provide a useful framework to create ‘systems change’ in organizations” (Bocken et al., 2014) and transform “high-potential sustainable ideas to sustainable innovations” (Boons & Lüdeke-Freund, 2013). Furthermore, the growing interest of analyzing business models in corporate innovation implies its usefulness in sustainability innovation (Bocken et al., 2014). As such, business models may be the key to unlock the power of business to adopt environmental strategies in order to handle sustainability issues (Yip & Bocken, 2018).

According to the type of environmental strategy (i.e. green systems) supported by business models, literature establishes a typology of sustainable business models, such as product- service systems, base of the pyramid, social enterprises or circular business models (Geissdoerfer et al., 2018). Bocken, 2014 proposes a wider sustainable typology for business models that also include: Material and energy efficiency; Creation of value from waste; Use of renewables and natural processes; Adoption of a stewardship focus; Green-consumption behavior; Re-purpose of the business for society; and Development of collaborative solutions (Bocken et al., 2014).

Strategists also argue that business models facilitate a link between firm’s capabilities and value creation to achieve a long-term perspective (Geissdoerfer et al., 2018). In that sense, firms do not simply pose a business model as a reaction to institutional pressures, but also as a vehicle through which the internal capabilities and resources of a business are put together to achieve a competitive advantage (Hart, 1995; Hoffman, 2001; Magretta, 2002).

As a consequence, the business model is supported by firm capabilities and resources in order to establish a successful path through their surrounding context (Day, 1994; D. Teece, 2007).

Based on the relation between firms’ capabilities and competitive advantage, some researchers have suggested that ESA has an impact on the positioning of organizations in the market (Christmann, 2000; Hart, 1995; Porter & Van der Linde, 1995). According to Ovans (2015), business models organize key capabilities and resources of the value chain of a firm. Furthermore, a firm’s business model allows it to handle its resources in order to exploit the opportunities that arise from a changing context (Drucker, 1994).

About the relation between firm capabilities and ESA, some researchers have suggested that the former (e.g. financial, technological, etc.) are used to develop, promote and position different environmental strategies (Hart, 1995; Porter, 1985), which, in turn,

have an impact on the positioning of firms in the market (Christmann, 2000; Hart, 1995; Porter & Van der Linde, 1995). The literature review shows a link between ESA and firm capabilities, as it is detailed below:

- Financial capabilities

Financial capabilities refer to the ability to capture rents from efficiency levels in firms (D. J. Teece et al., 1997). When firms have access to resources, they are able to quickly respond to external pressures for the adoption of environmental strategies (Darnall et al., 2008). Examples of environmental practices supported on financial capabilities include green research and development (Boons, 2009). Moreover, through specific environmental strategies such as cleaner production or the recycling of by-products, firms are able to capture rents and diminish their inefficiency cost to achieve an advantageous position (Christmann, 2000; Porter & Van der Linde, 1995).

- Technological capabilities

Technological capabilities constitute a key competency for firms to succeed. These include product innovation and the ability to design, engineer and manufacture the desired products through facilities and technology (Ulrich & Lake, 1991). Of significance is the business model's ability to create a fit between technological capabilities and (new) commercialization approaches to succeed on green and new markets (i.e. marketing of clean technologies) (Boons & Lüdeke-Freund, 2013). For example, the use of Information Technology (IT) and the adoption of technological innovations add value to the business (Zhang & Dhaliwal, 2009). Furthermore, IT is an enabler of shop floor operation management, since it implements business transactions and improves collaboration among businesses (Zhang & Dhaliwal, 2009). In this sense, the use of IT gives firms the “ability to understand, change, and reinvent business processes to better support sustainable practices” (Watson & Chen, 2010). An example of environmental practices supported by technological capabilities is provided by energy efficiency programs as a way of reducing energy consumption and CO₂ emissions (Watson & Chen, 2010).

- Organizational capabilities

Organizational capabilities include managerial ability (Mahoney & Pandian, 1992), manager leadership, employee competencies and organizational capacity for dealing with changes (Ulrich & Lake, 1991). They constitute a critical ability to respond to external demands through management practices, organizational processes and actions of employees (Ulrich & Lake, 1991). By doing so, organizations become capable of facing changing markets, maintaining the competitive advantage of firms (Ulrich & Lake, 1991), implementing of alternative (green) paradigms and thus change the way of doing business towards proactive ESA (Boons & Lüdeke-Freund, 2013). Environmental practices supported on organizational capabilities are mainly associated to optimizing the ecological performance of the entire corporate system (Shrivastava, 1995), product stewardship (Hart, 1995) and the integration of industrial systems in bioregions. The latter practice is intended for the exchange of emissions, waste and supplies in order to minimize resource consumption and generation of by-products (Christmann, 2000; Shrivastava, 1995).

- Strategic capabilities

Strategic capabilities are associated to the ability to perform activities differently than competitors in order to achieve an advantageous position in the market (Porter, 1996). They include cost (Porter & Van der Linde, 1995), product and reputation positioning (Hart, 1995). Examples are provided by: 1) eco-efficiency and pollution prevention for cost positioning (Porter & Van der Linde, 1995); 2) green product marketing for product positioning; and 3) CSR for reputation positioning (Hart, 1995; Porter, 1985).

In addition to business context and business models, the manager's CSR perspective constitutes an ESA influencing factor. Specifically, managers' individual values, attitudes towards social responsibility and leadership style influence ESA modalities (Basu & Palazzo, 2008). The role of managers as an ESA influencing factor is explained in the next section.

- Manager's perspective for ESA

Managers face a dilemma in managerial decisions for ESA according to their distinctive interpretations about the ambiguities of corporate responsibility issues (Hahn et al., 2014; Angus-Leppan et al., 2010). Such dilemma occurs because managers may interpret environmental issues in a different way and such issues can be assumed either as a threat (paradoxical frame) or as an opportunity (i.e. business case frame). Managers are under the influence of multiple institutional logics (Lee & Lounsbury, 2015) and are forced to reconcile the paradox of shareholder value and sustainability logics by, for example, moving organizations towards competitive forms of ESA (Brammer et al., 2012).

Interpretations of environmental responsibility issues might occur in relation to a profit, compliance or citizenship manager's perspective (M. Schwartz & Carroll, 2003). Finally, these interpretations, in turn, determine environmental strategy variations (Sharma et al., 2007) and because of that, interpretive schemes, become essential to help understand the heterogeneity of ESA (Laasch, 2018).

Manager's perspective for ESA goes back to the 1950's, when (Bowen, 1953; Bowen et al., 2013) proposed that manager's decisions should be assumed according to a perspective on social responsibility in terms of social justice and economic welfare. Later on, (Davis, 1960) established that manager's decisions about socially responsibility go through a process of reasoning as having a good chance of bringing long-run economic and reputational advantage to the firm. An additional manager's perspective towards social responsibility was established by (Friedman, 1970) who stated that "few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible". Finally, Steiner added, to this concept, that managers should have a perspective of social interest over the long run instead of the "old, narrow, unrestrained short run self-interest"(Steiner, 1971).

A stream of research explains the manager's perspective for ESA by relying on the cognitive frame concept, which is defined as a "mental template that individuals impose on an information environment to give it form and meaning" (Walsh, 1995). Cognitive

frames act as “cognitive filters that admit certain bits of information into the manager’s decision’s process while excluding others” (Porac & Thomas, 2012). In the case of sustainability issues, those issues produce a “decision-making context with highly ambiguous signals where decision-making strongly depends on the perspective managers use” (Bogner & Barr, 2000).

Carroll explains how different manager’s interpretations of corporate responsibility issues influence strategic decisions (Schwartz & Carroll, 2003). The manager’s perspective for ESA is the outlook of the manager in face of the responsibilities of the firm (Mazereeuw et al, 2014). According to Schwartz & Carroll, manager’s perspective is classified in terms of three types of responsibilities: profits-oriented, compliance-oriented (law-fulfilling duties) and societal-oriented (concerns about contributing to social purposes) (Schwartz & Carroll, 2003).

(Berger et al., 2007), establishes a similar typology according to three rationales: the business-case model (i.e. economic reasons), the social values-led model (i.e. social duties but non-economic reasons) and the syncretic stewardship model (i.e. societal perspective while embracing economic reasons). Because Carroll’s classification is useful in identifying the benefits that business receive (i.e. economic performance for a profit manager’s perspective, reputation and legitimation for a compliance manager’s perspective and shared value for a societal manager’s perspective), this is critical in building the business case for ESA or to eliminate tensions in managerial decisions (paradoxical frame) according to each manager’s perspective toward ESA. Managers, in particular, “like to think of their economic and social performance as something that they are doing not only for themselves, but also for society, as they fulfill their institutions’ mission to provide goods and services for society” (Carroll & Shabana, 2010).

In a profit-oriented perspective, the responsibility focus is the creation of economic value for shareholder satisfaction (Friedman, 1970) and the improvement of environmental performance. “Research about environmental management argues that the adoption of environmental practices by companies leads to good environmental performance” (Annandale et al., 2004; Melnyk et al., 2003). This is achieved by, for example, process optimization and energy and waste management (Bansal, 2000; Porter, 2010). In those cases, environmental practices are associated to good business procedures (Hendry & Vesilind, 2005).

When a manager’s perspective is oriented towards compliance, their responsibility focuses on shareholder satisfaction. In these cases, social issues are driven by institutionalization processes or stakeholder influence. These stimuli are mainly exerted by regulators and, more frequently, by communities, for the company to fulfill environmental standards (Freeman, 1984). Environmental practices associated to compliance include the control of air emissions, pretreatment of waste water and the disposal of hazardous materials (Hendry & Vesilind, 2005).

In a societal perspective, the responsibility focuses on doing good and attending to social needs beyond economic and legal obligations (Loe, Terry, Ferrell & Mansfield, 2000). In this case, environmental practices are associated to reducing adverse impacts on health or the environment (Hendry & Vesilind, 2005).

The distinctive characteristics of manager’s perspective are presented in Table 6.

Table 6. Manager’s perspective and Environmental Strategies

Manager’s perspective	Characteristics	Drivers	Typical Environmental Strategies	References
Societal responsibility	* Focus on issues beyond economic and legal obligations.	Societal needs.	* Reducing adverse impacts beyond legal and economic obligations	Berger et al., (2007), Schwartz & Carroll (2003)
Profits responsibility	* Focus on profits and fulfillment of the law and basic rules of society.	Shareholders and consumers.	* Process optimization *Energy and waste management	Berger et al., (2007), Schwartz & Carroll (2003)
Compliance responsibility	* Focus on fulfilling the law and cultural expectations.	Demands from regulators and communities for environmental and social licensing.	* End of pipe solutions *Disposal treatments	Berger et al., (2007), Schwartz & Carroll (2003)

Individual characteristics of managers include personal values and leadership styles in addition to their perspective toward ESA. Personal values help managers to make decisions and shape the adoption of environmental strategies. According to Schwartz, personal values are classified in terms of the interest of individuals such as 1) altruism to serve collective purposes, 2) benevolence focused on the welfare of others, 3) universalism to understand and appreciate the welfare of all people and protection for nature 4) self-interest to serve individual achievement and power, 5) openness to change to serve self-direction (e.g. independent thought) and stimulation (e.g. novelty and challenge) and 6) tradition and conformity to a value system focused on a body of customs (S. Schwartz, 1992; Slimak & Dietz, 2006).

In turn, leadership style is the way managers gets their people to do their job. Leadership style is classified as: transactional-constructive, transactional-active or transformational

(Bass et al., 1987). The transactional leadership style incorporates a reciprocal exchange relation between manager and followers (Sosik & Dionne, 1997). Sosik (1997) classifies transactional leadership as passive (absence of leadership), active or constructive. In a transactional-active style, managers establish standard settings, monitor deviation and look for mistakes (Bass et al., 1987) while in a transactional-constructive style, managers establish goals, clarify desired outcomes, give rewards and provide feedback (Bass et al., 1987). Furthermore, transactional constructive managers praise their employees while maintaining the *status quo* as long as standards are being met (Bass et al., 1987),

In a transformational leadership style, managers develop followers so they can lead themselves (Ciulla, 1999) creating an intellectual stimulation and an inspirational motivation (Bass et al., 1987; Sosik & Dionne, 1997). Even more, the transformational leadership is “a form of leadership in which relationships are organized around a collective purpose” (Burns, 1978), involving charisma and the stimulation of the ideas and values of subordinates (Bass et al., 1987). Turner et al. (2002) have found a correlation between managers’ understanding of social needs and transformational leadership styles (Turner et al., 2002).

Finally, it is noteworthy how the level of adoption of environmental strategies differs according to the level of development of the economy in which an industry is located. Hence, the next section addresses ESA in emerging economies, which is part of the objectives mentioned in the introduction.

2.5. ESA in Latin America

Businesses operate in diverse cultures and locations. Because of this, their strategies can differ according to those circumstances. For example, in some countries, regulation or market expectations can be assumed as an opportunity or a threat to develop business (Bird & Smucker, 2007). On the other hand, context turbulence and local social demands constitute influencing factors for environmental innovation and the building of environmental capabilities in companies from Latin American countries (Duque-Grisales et al., 2020). Finally, emerging economies exhibit institutional weakness (i.e. enforcement of regulation), which increase uncertainty levels and promote opportunistic behavior among players (Gao et al., 2017; Peng, 2002; Peng et al., 2008).

Companies in emerging economies (e.g., Latin American countries) address two important factors: regulation and politics (Badri et al., 2000). The concerns of companies about regulation are mainly associated to taxes, investment and merger laws, while those related to politics mainly refer to the stability of the regime in host countries (Badri et al., 2000). Silvestre (2015) also mentions that, because of continuous political and regulation changes, companies in emerging economies face a highly volatile business environment. Jamali (2008) analyzes corporate responsibility in emerging countries and maps various social performance dimension case studies in different industries. Thomsen (2010) has also performed studies in emerging countries, where he evaluates the influence of parent companies and corporate governance on safeguarding compliance towards corporate responsibility.

The adoption of environmental strategies has become an important subject of interest in emerging countries, but it is still necessary to know more about the way firms adopt

environmental strategies in those latitudes (Li et al., 2010). The few existing studies indicate that ESA in Latin America is quite underdeveloped, except for large firms and subsidiaries from multinational companies (Torres-baumgarten & Yucetepe, 2009). Fritz & Silva (2018) add that ESA factors in Latin America remain largely unexplored, especially when it comes to proactive strategies. It is this absence of corporate sustainability efforts that provides the ground for communities demanding more proactive ESA from the business side (Torres-baumgarten & Yucetepe, 2009) because of poor socio-economic development in the region, and high- income inequality which constitutes a problematic issue (United Nations, 2020).

Furthermore, “increasing the knowledge about these regions’ own characteristics and having more representation about building theory and showing empirical evidence are needed” (Fritz & Silva, 2018). The literature concerning environmental strategies in those emerging countries is still limited, and empirical research on ESA in local companies has been scarce (Muller & Kolk, 2008). Attention is beginning to grow on sustainability management in Latin America because of the differences in consumption and production patterns as its specific environmental issues (Guimarães, 2012).

Environmental issues in Latin America, faces too many challenges: climate change related loss of farm land and perpetual snows (Montagnini et al., 2013), migration of communities because of environmental issues, depletion of the amazon forest and change of land use originated in cattle practices (Hardoy et al., 2014; Shearman et al., 2012)

Ioris (2014) and Ruiz-Mallen (2015) have studied how institutions and communities become involved in the conservation of natural areas in response to context pressures and personal motivations. Cruz (2009) has studied both the challenge of multinational companies when adopting green strategies in subsidiaries and the influence of parent companies on local firms. Marcaneiro (2015) has studied how institutionalization affects ESA, specifically eco-innovation practices.

Rivera-Camino (2012) has analyzed the motivations for the adoption of environmental strategies associated to market influences in business. On the other hand, in Colombia and México, Van Hoof (2014 & 2018) has examined the role of anchor companies in the dissemination of environmental strategies by evaluating the collaboration capacity for sustainable supply chain management in small and medium sized enterprises. Also in México, Montiel (2009) studied the institutionalization mechanisms of early adopters, wherein this author identified two characteristics that make businesses more likely to become institutional entrepreneurs: companies with available free resources and companies that take part in broad markets.

Although relevant work about environmental strategies has been published recently in Latin America, most research still focuses on developed countries. For example, Fifka & Pobizhan (2014) point out that, among the BRIC countries, Brazil is the one in which the least research about environmental and CSR strategies has been conducted. In the case of Latin America, the literature is still scant; most research is still published in gray literature or in Spanish or Portuguese. Furthermore, literature and empirical studies about environmental and CSR strategies in the region are certainly scarce (Vives & Peinado-Vara, 2011).

D'Earnhart et al. (2011) add that few works about the motivations for sustainability management have focused on emerging economies, and this is particularly true for Latin-American countries. Some developing economies face specific social and environmental issues that influence the type of responsibilities assumed by firms (Bhattacharyya, 2015). Hence, additional research is needed to determine which ESA factors could be more successful in Latin-American countries. Furthermore, the drivers for ESA in different contexts may be distinct due to cultural and social reasons (Aguinis & Glavas, 2019).

Suffering from the problems of inadequate infrastructures, social inequality and poverty, emerging economies are the source of resourceful and societally oriented managers (Davila et al., 2018). The characteristics of business contexts, business models and manager's perspectives need to be better understood to develop new insights on the factors for ESA in emerging markets (Adidam, 2014). For example, Latin-American multinational companies (i.e. Multilatinas) have a long history of a unique commitment to social development in the Latin-American region according to the economic history, culture and traditions of the region (Davila et al., 2018). Researchers have documented that Multilatinas have deployed strategies for human development, health care, improvement of education and living standards to meet the needs and expectations of local community (Davila et al., 2018). In this context, attention to sustainability management in Latin America is beginning to grow (Fritz & Silva, 2018).

So far, it has been shown that the literature on ESA shows, on the one hand, some leading theoretical perspectives and ESA factors, and on the other hand, a typology of environmental strategies that has been applied in the current research. The next section builds on these theoretical bases and proposes an integrated model for analyzing ESA and its influencing factors in large Colombian businesses.

2.6. Theoretical model of ESA and ESA factors

This section presents the theoretical model employed to study the leading question of this dissertation: *What are the factors that drive Colombian big firms to adopt environmental strategies?* Building on theories used in the environmental management literature, the model integrates three leading factors influencing the adoption of environmental strategies in business, as presented in the review detailed above. These are the business contexts, the business models and the manager's perspectives. (See Figure 6. Theoretical Model of ESA and ESA Factors).

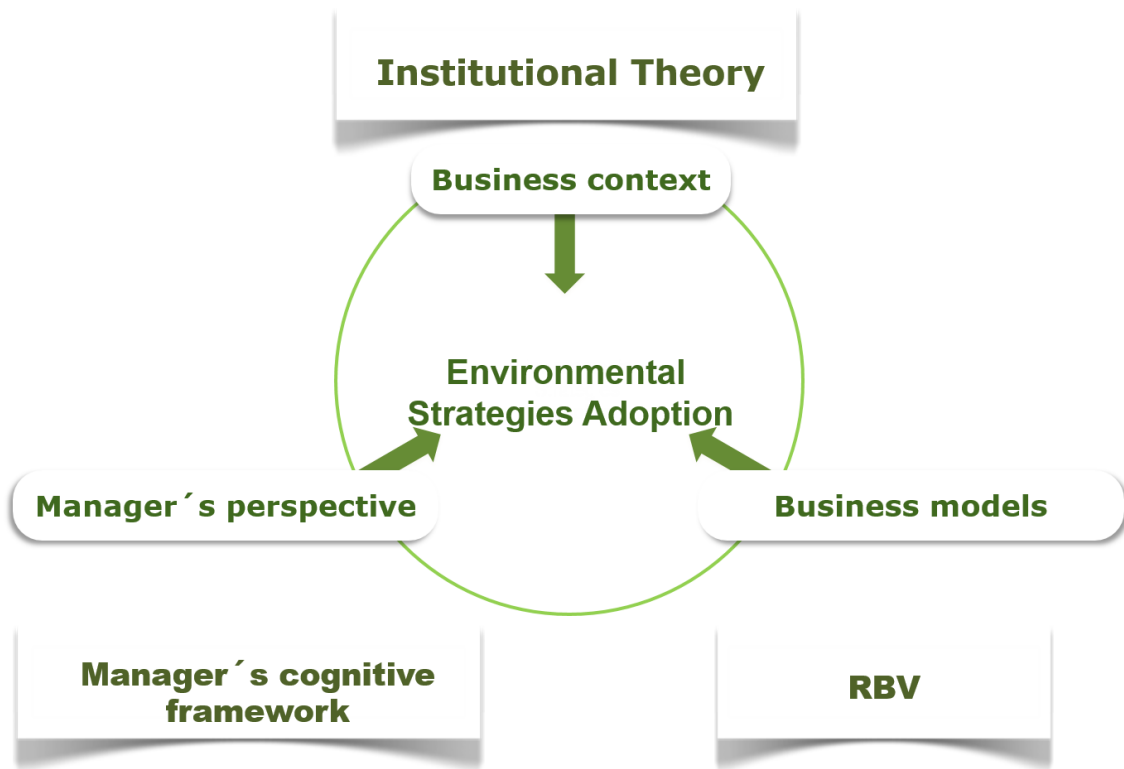


Figure 6 Theoretical Model of ESA and ESA Factors

From the literature on the topic, the author proposes as a general hypothesis that business context, business models and manager's perspective, under a unified view, influence the adoption of environmental strategies. Thus, a co-occurrence configuration is highlighted between those influencing factors (e.g. business context, business models and manager's perspective) and the adoption environmental strategies such as green processes, green products and green systems design.

Specifically, it is proposed these propositions for the general hypothesis: (i) green processes strategy is triggered by organizational field contexts (i.e. associations and green competitors), dynamic business models and profit-oriented managers; (ii) design of green products is stimulated by green market contexts, dynamic business models and profit-oriented managers; (iii) green systems are promoted by societal needs in conjunction with transformative business models and citizenship oriented managers.

- ESA and influencing factors

Model used the main *business context* types identified by the institutional theory as influencing factors for environmental strategies adoption and associated to *coercive* (i.e., legal regulation) normative (i.e. green markets and associations) and mimetic forces (i.e. competitors and parent companies' best practices) (Christmann & Taylor, 2001; A. J. Hoffman, 2001; Jennings & Zandbergen, 1995; Zhu, Cordeiro, & Sarkis, 2013) (Table 7. ESA and Influencing factors).

In turn, model used the three *business models* identified by the Resource Based View (RBV) affecting the adoption of environmental strategies: *Stable* (focused on maintaining

their market portion and their business as it is), *Dynamic* (aimed at increasing current market portion) and *Transformative* (seeking to create new markets and ways to address societal needs) (Boons, 2009) (Table 7. ESA and Influencing factors).

Finally, model used the concept of manager's cognitive frames for Corporate Sustainability that have established how decision-makers deal with environmental issues through either a business case or a paradoxical frame for sustainability (Hahn et al., 2017). In line with the manager's cognitive frame, model used the three different *manager's perspectives* that literature has established as: *Compliance* (focused on fulfilling the law and cultural expectations), *Profits* and basic social rules, and *Societal* (social needs beyond economic and legal obligations) (M. Schwartz & Carroll, 2003) (Table 7. ESA and Influencing factors).

Taking into account that leading question was focused on establishing *what are the factors that drive Colombian big firms to adopt environmental strategies?* conceptual model was used to analyze environmental strategies adoption (e.g. green products, green processes and green systems). Because of that, when collected information for the case studies, there was registered the type of regulation that applied for each case and additional sources of pressure such as mimetic (i.e. green competitors) and normative ones (market requirements).

Normative and mimetic sources were used in the conceptual model as lens to understand the influence of green markets and green industry requirements (normative sources) and of green competitors and green parent companies (mimetic sources) in the adoption of environmental strategies as is exposed by the literature by (Zhu, Cordeiro, & Sarkis, 2013).

As to the specific co-occurrence between ESA factors and environmental strategies, it can be said that: (i) end-of-pipe or pollution control technologies are favored by regulatory contexts (Zhu, 2005), stable business models (Boons, 2009) and compliance-oriented managers, (Freeman, 1984); (ii) substitution of restricted materials is stimulated by regulatory (Martínez de Anguita, 2008) and compliant managers (Carroll, 1999); (iii) lobbying activities are associated to the joint action of regulatory contexts, compliant managers (Carroll, 1999) and stable business models (Boons, 2009); and (iv) reputation management is favored by public concern and stable business models.

Additionally, (v) adoption of sectorial standards (i.e. ISO 14001) is caused by organizational field contexts (Christmann & Taylor, 2002); (vi) green processes is stimulated by dynamic business models (Boons, 2009) and profit oriented managers (Bansal, 2000) (vii) design of green products is stimulated by profit oriented managers (Shalteger, 2012), green market contexts (Genc, 2013), and dynamic business models (Boons, 2009); (viii) design of green systems are promoted by societal-oriented managers (Hendry & Vesilind, 2005) and community or NGO contexts in conjunction with transformative business models (Boons, 2009). ESA and influencing factors are presented in Table 7.

Table 7 ESA and influencing factors.

INFLUENCING FACTORS	TYPE	ESA (Main practices)
<p>BUSINESS CONTEXTS</p>	<p>Regulation (i.e. Environmental licensing, pollution limits and environmental permits)</p>	<p>Management of environmental plans, end of pipe technologies and permits renewals.</p>
	<p>Community (i.e. Social licensing and public concern)</p>	<p>Implementation of social plans, environmental communication campaigns, substitution of possible toxic components and environmental branding reputation.</p>
	<p>Green markets (i.e. supplier or consumer demands)</p>	<p>Subscription to environmental requirements and development of green products.</p>
	<p>Green industry (i.e. competitors and parent companies or subsidiaries)</p>	<p>Standardization of processes and certifications.</p>
<p>BUSINESS MODEL</p> <p>BUSINESS MODEL</p>	<p>Stable business models supported by:</p> <p>Lobbying capabilities.</p> <p>Technological know-how</p> <p>Stakeholder transactionship management</p>	<p>Environmental litigation in conjunction with lobbying activities.</p> <p>End of pipe technologies and process improvement.</p> <p>Environmental communication and transactional relationships with communities (e.g. construction of school facilities and medical centers, development of fairs and recreational spaces for communities).</p>
	<p>Dynamic model supported by:</p> <p>Innovation and R&D capabilities</p> <p>Operational efficiency</p> <p>Management of relations with stakeholders</p> <p>Collaborative R&D Partnership development in</p>	<p>Development of green products.</p> <p>Cleaner production.</p> <p>Environmental communications and building relationships with communities.</p> <p>Green market development</p> <p>Product stewardship</p>

	Transformative model supported by	value-chain efficiency Stakeholders' engagement	Green industrial systems for the exchange of materials and services. Green standard settings. Social innovation.
MANAGER'S PERSPECTIVE		Compliance focus	Support of practices aligned with environmental advocates such as regulators, NGO's and communities: Regulation fulfillment, biodiversity conservation, community-based investments, financing of and donations to environmental interest groups.
		Profit focus	Support of green products to achieve profits in a green market or support of green processes to gain economic efficiencies.
		Societal focus	Green systems design such as production and consumption systems and development of capabilities in collaborative networks.

2.7. Conclusions

This chapter reviews the academic literature published on the core topics of this dissertation, namely environmental strategies and their influencing factors. Literature review allowed to identify useful environmental strategies typologies according to the stands point of different conceptual paradigms such as value creation, business model innovation, risk management and response time of firms.

A typology of environmental strategies was arranged as a framework for analysis for this research. This typology discriminates between green processes, green products and green systems strategies. Accordingly, literature provided insight into ESA influencing factors at three different dimensions: business context, business model and manager's perspective.

At the end of the chapter and building on IT, RBV and CSR, author proposes an integrated model for analyzing ESA and its influencing factors in large Colombian businesses. The model proposed establishes a co-occurrence configuration between different ESA factors and distinct corresponding strategies.

3. Research methods

This chapter introduces the methodology employed in the present work to assess the fulfilling of the predictions derived from its central hypothesis, *i.e.*, the series of propositions according to which ESA varies as a function of the co-occurrence of business context, business models and manager's perspective factors. Two fundamental issues had to be solved in this respect, namely *how* and *where* to evaluate the co-occurrence of these factors. The latter of these issues has to do with which companies to investigate, while the former deals with the strategy to be employed in such investigation. Thus, detail is provided on the reasons to choose a qualitative approach (section 3.1) rather than a quantitative one, in order to analyze a group of "green" companies through a case study strategy (section 3.2). Following these methodological considerations, the reader will find the criteria employed to select the case studies (section 3.3) and, finally, the protocol employed to characterize ESA and ESA factors in each of the studied companies (section 3.4).

3.1. Data assessment approach

ESA and ESA factors were studied through a qualitative approach, which was chosen in direct connection to the nature of the object of study itself. Provided that ESA is a decision making process, its very complexity made it necessary to resort to a research methodology to analyze the topic in a non-intrusive or restrictive environment. Therefore, the qualitative approach was selected, because is known to deal with the nature but not the amount of things (Dabbs, 1982), and with the characteristics of the individuals in their usual environment (Berg, 2009) as they express themselves through their natural (unbiased) speech. Furthermore, when it came to analyzing the sustainability reports, public interviews and newspaper articles about the studied organizations, which completed the information sources of the present analysis, the need for a qualitative approach became even more relevant. In effect, the richness, variety and diversity of information provided by these sources made it necessary to allow an interpretative process focused on the assessment of the phenomenon in its natural context. Again, the qualitative focus satisfied these needs (Hernández-Sampieri, 2014). In sum, the qualitative approach allowed the researcher to access a diversity of key factors through interviews or analysis of pertinent documents.

3.2. Focus and scope

The reason for choosing the case study strategy to conduct the present research has to do with a series of relevant considerations about its particular nature. Case studies are usually employed when there is need to analyze a phenomenon in depth (Hernández-Sampieri, 2014). This is frequently connected to the answering of explanatory questions about the object of study, all of which makes it necessary to manage several parameters at the same time, with variable intensities depending on the conceptual connections that may arise from the analysis (Yin, 2003). In such a context, it turned out that a statistical sampling would constitute a rather limited and misconstruing straightjacket.

The foregoing considerations fit rather neatly with the characteristics of the present work, framed in its leading research question: *What are the factors that drive Colombian big firms to adopt environmental strategies?*

This rather explanatory question, coupled to the main background driver of the present work (characterizing “green” strategies in Colombia and, in general, in emerging economies [see section 2.5]), led to initially exploring the phenomenon and all its seeming complexity through the case study strategy as framed in its aforementioned characteristics. Said complexity also imposed the need to produce a nuanced view of ESA (c.f. Flyvbjerg, 2006), which could only be attained by generating a case-sensitive, content dependent, and deeply grounded assessment of the co-occurrence configurations between factors and outcomes (c.f. Eisenhardt, 2010). In fact, the present dissertation provides a solid basis for broader (and, thus, more generalizable) works to be carried out through future research.

3.3. Case selection

The selection of a case study needs to be aligned with the theoretical context in order to achieve a consistent choice (Cuervo-Cazurra, et al 2016). This leads to what is commonly known as “theory-driven sampling”, which is particularly adequate when it comes to the testing of predictions such as those derived from the current hypothesis (Denzin, 1989). In theory-driven sampling, initial frameworks are developed from prior theory and adjusted through case studies. As a consequence, the initial propositions are confronted with the empirical reality provided by the case studies (Cuervo-Cazurra, et al 2016).

Theory-driven sampling implies that the researcher performs purposive selection on the basis of provisional theoretical ideas. In this way, it is possible to answer questions that have arisen from the analysis or from reflection on previous empirical work. “Such questions concern interpretations of phenomena (e.g. ESA in an emerging economy) as well as finding relations between factors and outcomes” (Boeije, 2002).

Thus framed, the cases of the present work were chosen through purposive sampling because of their strategic importance in relation to the research propositions (cf. Flyvbjerg, 2006). “When a pattern from one data source is corroborated by the evidence from another, the finding is stronger and better grounded. When evidence conflicts, the re- searcher can sometimes reconcile the evidence through deeper probing of the meaning of the differences” (Eisenhardt, 2010). Thus, in looking for the cases, two main sets of criteria were taken into consideration. In the first place, those company characteristics that would most likely lead to select “green” companies. Since (according to the hypotheses) the latter had to include distinctive strategies, the second set of criteria allowed discriminating between them and, thus, making sure they were represented in the sample (See Table 9. Selected green companies).

As to the criteria employed to select “green” companies, two aspects were taken into consideration: being listed in the Dow Jones Sustainability index or having clear public recognition in the sense of a sustainable performance (e.g. adoption of ISO 14001 certification, subscription to the Global Compact principles, or Report by Merco of the best reputed Colombian companies due to sustainable performance).

Regarding the distinction between companies influenced by a variety of ESA factors, the following case selection criteria were carefully followed.

**Selection of cases*

The presence of ESA factors was checked for the full ranges reported by the literature as a means to corroborate the co-occurrence configuration between specific influencing factors in ESA modalities. The cases that were likely influenced by normative sources at business context (i.e., green standards and consumer demands) were selected from sectors that were active in export or green markets that adopt rules, norms and procedures to fulfill market requirements. Additionally, firms that were likely featured by mimetic sources at business context were selected from companies under the influence of a green industry (i.e., competitors and parent companies or subsidiaries), that were particularly homogeneous in the products they offered (i.e. dairy, chemicals and financial services), in the environmental impacts and in the adoption of practices for impact mitigation (i.e. management of packaging in dairy sector, management of restricted materials in chemical companies and financing of green practices at banking sector) Simms, 1991). For their part, companies that were likely influenced by coercive forces at business context were selected from sectors (i.e. extractive industries and commodities) that are highly regulated. Specifically, at extractive sector, the public perception of its ecological impact imposes the need for certain social and environmental licensing to operate (Adelman, 1987).

The first likely case corresponded to an agri-business association, which is active in the export market that demands the development of organic products. Association was selected as a case study because it operates as a business (i.e. Association develops its products attending the needs of the market through a distribution network) and has leveraged its operation in a cooperative model that allows more than 500 peasant families to come together in order to negotiate better economic conditions for their products. Business model performed by the association could become an alternative for peasant families in order to improve their socio-economic conditions and operate under market rules. Due to its dynamic business model, Agri-business association has been able to get access to international, green and mature markets through the production of certified organic products.

The second case corresponded to a Bank, which has been influenced by a green market focused in green bonds emission and green financing driven by international financial institutions such as the IFC. Due to its dynamic business model, Bank has been able to respond to market demands to issue the largest green bond of a Latin American financial institution (USD \$149 millions), in order to support the construction of climate smart projects such as green office buildings (IFC, 2017).

The third case corresponded to a chemical manufacturing company, which was considered informative because of the influence of parent company in the adoption of environmental strategies (i.e. cleaner processes) and its dynamic business model focused in the innovation of its products and processes, the influence of public perception about the toxicity of its products and its articulation with different stakeholders (i.e. certification institutions and regulators) for the promotion of environmental product standards.

The fourth case corresponded to a dairy product manufacturing company, which has been influenced by a green industry in which early competitors have developed carbon neutral products. Company accounts for a dynamic business model to improve products and processes, in order to reduce its carbon footprint, through the reduction of packaging weight and of water and energy consumption.

The fifth case of proactive ESA corresponded to a cosmetic manufacturing company, which was considered central for this research because its competitors' influence on the use of natural ingredients and on the development of cruelty free products.

Companies (cases 6th and 7th) that were likely influenced by coercive sources at business context were selected from sectors (i.e. extractive industries and commodities) that are highly regulated. For example, at extractive sector, the public perception of its ecological impact imposes the need for certain social and environmental licensing to operate (Adelman, 1987). The extractive industry is also characterized by low product differentiation and a high level of cohesion and interaction among enterprises, which determines the adoption of stable business models (Bansal, 2000). Under these criteria, two companies from the extractive sector were selected. One of them is a public organization from the Oil & Gas sector (case: Public company focused on oil & gas), while the other one is private and focuses on the use of water resources for power generation and distribution (case: Private multinational company focused on utilities and energy generation).

Table 8 Selected cases

Selected cases	Key features
<ul style="list-style-type: none"> • Public company focused on oil & gas. • Private multinational company focused on utilities and energy generation. • Farmers' Association. • Bank. 	<ul style="list-style-type: none"> • Cases selected from highly regulated sectors (extractive industries and commodities). • Community perception about ecological impact. • Social licensing to operate exerted by local communities. • Case selected from an agro-industrial sector which is active in an export market that demands the development of organic products. • Association operates as a business and has leveraged its operation in a cooperative model that allows more than 500 peasant families. • Bank is influenced by a green market focused in green bonds emission and green financing driven by international financial institutions.

<ul style="list-style-type: none"> • Chemical-product-manufacturing multinational company 		<ul style="list-style-type: none"> • Company influenced by parent company and public concern about product's toxicity.
<ul style="list-style-type: none"> • Dairy-product-manufacturing company 	local	<ul style="list-style-type: none"> • Mimetic pressures exerted a green industry in which early competitors have developed carbon neutral products.
<ul style="list-style-type: none"> • Cosmetic-product-manufacturing multinational company 		<ul style="list-style-type: none"> • Company under competitors' influence for the use of natural ingredients and the development of cruelty free products.

In addition to previous mentioned criteria, all the cases were selected according to attributes such as size (being listed in the “Biggest Colombian firms” report⁵), leadership in their corresponding sector (e.g., market share), ownership (private or publicly owned companies), country of origin (multinational or domestic firms) and industrial sectors (banking, chemical, utilities, energy, agri-business, dairy and cosmetic). The cases were chosen across industries because firms from different sectors face diverse sustainability challenges and are, therefore, influenced by distinctive factors, all of which may result in them taking different approaches in developing and implementing their environmental strategies (Jia, Zuluaga-Cardona, Bailey, & Rueda, 2018).

3.4. Case study protocol

Data collection

In collecting data for this study, the author intended to obtain information both broad and deep enough to test the propositions in question and draw conclusions. To this objective, data were collected from multiple sources, including analysis of interviews, public documents and the study of company sustainability reports.

Analysis of public interviews with company managers

The author analyzed public interviews with the CEO's of the companies. These interviews, which were carefully selected, allowed appreciating corporate policies, together with the main individual characteristics of the managers, their particular approach to social responsibility, and the environmental initiatives they supported. According to Yin (2010), “relevant data may not be limited to interviews, but can involve the retrieval and examination of reports and documents” (Yin, 2010). These interviews were complemented with reports and public documents, which are explained in the following section.

Sustainability reports

Data from published sources, newspaper searches, company accounts, annual reports, and corporate environmental reports were used to provide additional information to that obtained from the interviews with company officers. These sources provide key

⁵ <https://especiales.semana.com/100-empresas-mas-grandes-de-colombia-2018/index.html>

information because they are prepared for the examination of others (Denzin, 1970). In addition, public data constitute important sources of information in support of fieldwork aimed at evaluating firm capabilities (M. Delmas et al., 2011) and business context (Yin, 2010).

Sustainability reports were chosen as source of public data because they are associated to the perspective of individual participants such as the president of the company or its environmental manager. Their individual stances constitute the primary sources of the environmental strategies of the company. Additionally, sustainability reports are written according to specific guidelines [e.g., Global Reporting Initiative - GRI] that specify the content and quality of the reported information across economic, environmental, and social categories. Moreover, sustainability reports illustrate the environmental strategy and performance of the company and its relations with stakeholders. Besides, they present additional information related to labor practices, human rights, societal and product responsibility (GRI, 2011). For the present research, sustainability reports and public documents became a source of information for the evaluation of firm capabilities, environmental strategy focus and manager profiles.

Content analysis technique

“In order to turn qualitative data from public documents into a quantifiable form to allow the testing of the hypothesis, a *content analysis technique* was carried out. Following Glaser, B.G. & Strauss (1967), all relevant data were coded and systematically classified, analyzed and interpreted.

The reason for choosing a content analysis technique has to do with the particular features of these methods, which are usually objective and systematic in nature. Indeed, they are intended “to increase the understanding of particular phenomena and of the manifest content of communication” (Berelson, 1952). The particular content analysis technique employed in this work is certainly aligned with the answering of the main research question of the present dissertation (see the introductory chapter), in the sense that it allows managing the research context in the examination of the texts (cf. Krippendorff, 2018). Furthermore, content analysis goes hand in hand with theory-driven sampling, which was used for case selection in this research.

- Data coding

The transcripts of public documents were carefully read, thus delimiting or underlining the textual fragments to identify ESA factors and environmental practices across the cases (Figure 9). Apart from the transcripts, annotations (codes) were made on the text, to indicate which factors (e.g. context, business model, and manager’s perspective) and practices (e.g. cleaner production, green products or societal oriented) corresponded to each transcribed fragment.

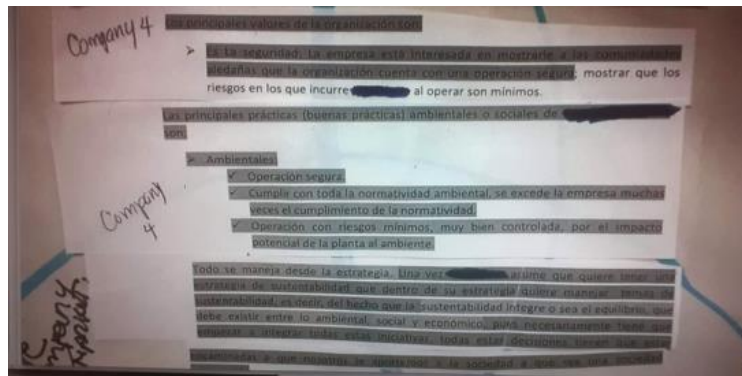


Figure 7 Data coding

- Classification

In the first place, the data in each of the transcripts of public documents were coded according to the ESA factor (e.g., context, business model and manager's perspective) or environmental strategy classification systems employed for the present work. Author evaluated data to determine how well it matched with the ESA and ESA factor types (Reay & Jones, 2016). Theoretical framework became a tool to interpret the adoption of environmental strategies and its main influencing factors in large Colombian firms. Subsequently, all the fragments thus identified were detached from their original sources and grouped according to the classification in question, to the finest possible level of detail (e.g., profit, compliance or societal manager's perspective). This was done manually in each one of the case studies (e.g. Bank or Chemical Company or Association, etc.) (Figure 10).

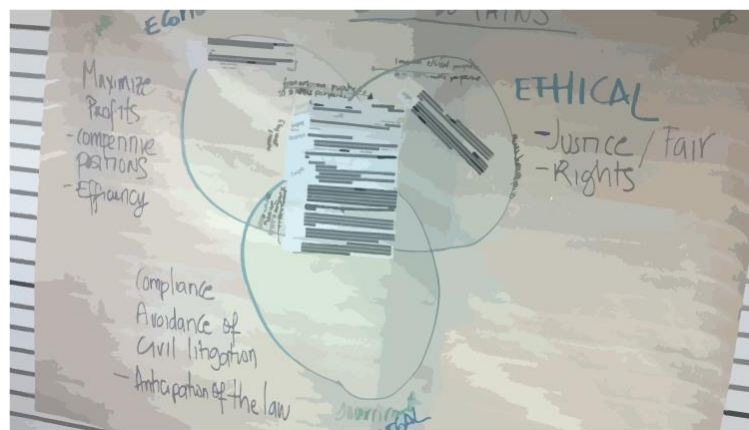


Figure 8 Data classification

- Analysis and interpretation

In the next step, the data that had been previously grouped according to classification was interpreted and analyzed using the proposed theoretical model, which related environmental strategies to specific ESA factors. Accordingly, these data were separately displayed for each case study in a visually coherent and integrated way. This allowed

checking on a case-by-case basis for the matching between ESA factors and environmental strategies.

4. Case studies

This chapter presents the characterization of ESA and ESA factors in seven case studies of different large firms operating in Colombia. The case studies were built from analysis of interviews and public document, aiming to identify the factors and strategies of each of the studied companies. The case studies represent the empirical reality to test the propositions about the *co-occurrence configuration between the adoption of environmental strategies and influencing factors*.

4.1. Bank

Bank is a Colombian company established in the market by local investors in the 1970s. Over the years, Bank's portfolio has evolved from savings and mortgage loan products to consumer and commercial products. By 2010, Bank had issued preferential shares to leverage its growth and expanded its operations in different countries in South America. In 2018, Bank reported a net income of 3 billion USD. Bank has 16,000 employees who support the operation of 592 branches in the country.

- *Observed environmental strategies*

The environmental practices of Bank were associated with the development of *green financial products* and the implementation of *green processes* in addition to their commitment to voluntary programs, environmental reporting and sustainability benchmarking (See Table 9).

Bank has developed green financial products such as 1) green lending to incorporate environmental due diligence into the lending process and 2) green bonds in support of climate-smart projects. Green lending constituted a sustainable choice aimed at financing customers to guarantee cleaner production processes, more efficient energy consumption and the generation of renewable energy (Sustainable Report, 2017).

With respect to green bonds, in 2017, Bank issued the largest green bond of any Latin American financial institution (USD \$149 million) to support the construction of climate-smart projects, such as green office buildings (IFC, 2017a).

Bank has also implemented greener processes towards the improvement of operational efficiency and energy consumption at their branches. Since 2013, Bank has implemented an energy-efficient program in offices and branches to reduce environmental footprint of their operations. This program has included the development of criteria for the acquisition of more efficient technologies, the design of technical specifications for brand signboards to include environmentally friendly elements and the implementation of efficient lighting systems (Bank Sustainability Report, 2017).

In addition, Bank has committed to voluntary programs such as *Protocolo Verde* and the UN Global Compact. *Protocolo Verde* is a cooperative program between ASOBANCARIA (the Colombian banks association) and the government to achieve standardization in the banking industry for the adoption of environmental practices focused on 1) green financing, 2) green due diligence in financing evaluation and 3) ecoefficiency (Asobancaria & Ambiente, 2012). Bank has provided visible leadership in

defining the *Protocolo Verde* terms since the beginning of the voluntary program in 2012. The UN Global Compact is also a voluntary initiative based on the implementation of UN sustainability principles on behalf of managers of organizations.

Bank performs sustainability benchmarking by being listed on the Dow Jones Sustainability Index (DJSI), where it has been listed since 2014. The DJSI is a benchmark for sustainable companies across 60 countries and represents the top 10% of the largest 2,500 companies in the S&P Global BMI based on long-term economic, environmental and social criteria (RobecoSAM, 2017).

Bank has also adopted environmental reporting initiatives, such as the Carbon Disclosure Project (CDP), which is a global self-reporting initiative for CO2 emissions to promote climate change compensation activities.

The current survey did not observe any environmental practices performed to achieve social license from communities. Additionally, no specific environmental regulations or community hearing processes applicable to financial activities were detected. Bank mitigates the environmental impact associated with its financial services by paying for utility services. Finally, Bank projects related to communities were developed unilaterally and corresponded to philanthropic activities, environmental and social causes and SME development (Bank Sustainability Report, 2018).

In relation to philanthropic subjects, Bank has developed a program to teach children and young people how to properly manage their free time through recreational, cultural and artistic activities that strengthen their personal values (Bank Sustainability Report, 2018).

Environmental causes include the support of environmental interest groups and employees' voluntary programs in environmental education. Social causes include the development of cultural spaces (such as cinemas, libraries, exhibition halls and virtual classrooms) in remote communities (Bank Sustainability Report, 2018).

Initiatives include the development of a sustainable supply chain through a capacity building program focused on SMEs. In this case, leadership style was the mechanism for the development of a green culture for product stewardship at Bank.

Table 9 ESA - Bank.

OBSERVED ENVIRONMENTAL PRACTICES
<ul style="list-style-type: none"> *Practice of green due diligence * Participation in voluntary programs such as Global Compact and “<i>Protocolo Verde</i>.” *Adoption of practices in CO2 compensation *Adoption of self-reporting initiatives such as DJSI and CDP. *Support for environmental interest groups. *Finance for cleaner production practices. *Support for voluntary programs in environmental education. *Support for social causes.

- *ESA Factors*

- a) Business context

The influencing factors observed in terms of the business context corresponded to IFC⁶ norms and competitors' best practices. IFC "works with financial institutions to introduce environmental standards to their lending practices in order to support clients in management of environmental risks and conduct finance to responsible companies" (IFC, 2019). Specifically, IFC norms establish the use of green criteria in credit risk evaluation when a bank is granting a financial loan. The relation between IFC and Bank started in 1973 with IFC as a capital investor; later, it began to offer financial advice and make additional investments (EFE, 2020).

Competitors' best practices include participation in CO2 compensation activities, sustainable benchmarking and self-reporting initiatives. Bank has performed sustainability benchmarking since 2014, after its main competitor in Colombia was listed in 2011. Finally, Bank has been included in the Ranking Climate Disclosure of CDP since 2015, after its main competitor in Colombia was listed in 2012. The main competitor of Bank is the market leader and has historically been ahead of Bank in CO2 compensation activities and self-reporting initiatives, such as the Carbon Disclosure Project (CDP).

Coercive pressures, such as regulations or community demands, did not constitute a key influencing factor for the adoption of environmental strategies. The regulation of financial activities in Colombia has mainly focused on controlling the economic impact of monetary transactions and has not been not specifically directed towards environmental issues (Villamizar-Torres, 2015). From interviews and data analysis, no evidence was found indicating that regulators have instituted a relevant mechanism for the adoption of environmental strategies for Bank. According to Villamizar-Torres (2015), there is no specific environmental regulation applicable to financial activities in Colombia.

Communities did not institute a mechanism for the adoption of environmental strategies either. Specifically, hearing processes with ethnic or local communities have not occurred in the financial sector. Hearings and informed consent processes have occurred mainly in industrial sectors in which there is a plan to develop projects associated with natural resource exploitation (G. Rodriguez, 2014), which is not the case here. Furthermore, no record was found about the development of social plans as a way to manage a social license to operate.

Villamizar (2015) states that communities assume the banking sector does not affect the natural environment because its activities do not require raw materials or resources that come directly from nature. Table 10 presents a summary of influencing subfactors and environmental practices.

⁶ IFC is a capitalization fund provider that has supported Bank since the 1970s, at the beginning of its operations.

In Table 10 is presented a summary of the evidence found for influencing factors at Business Context.

Table 10 Business Context - Bank

ESA FACTOR	CATEGORY	EXAMPLES
BUSINESS CONTEXT	Normative	*Green due diligence in response to IFC norms. * Voluntary programs such as Global Compact and “ <i>Protocolo Verde.</i> ” *Subscription to Industry standards such as ISO 14001.
	Mimetic	*Adoption of competitors’ practices in CO2 compensation *Adoption of competitors’ self-reporting initiatives such as DJSI and CDP.
	Coercive	Do not apply environmental permits or hearing processes to this industry sector.

b) *Business model*

Bank has worked to develop innovative products based on its technological capabilities related to information and communication technologies. For example, in 2011, Bank developed a pioneering financial product to serve “any kind of consumer (banked, unbanked or under banked)” at the bottom of the pyramid at no cost (Exchange, 2012).

In a consistent manner, Bank has maintained these capabilities over years of operation. Recently, Bank developed a financial product to serve people with physical impairments (Asobancaria, 2017), showing once again the use of its capability to develop innovative products to serve societal needs. Bank has constantly used technological innovation in the service of value-added business endeavors through the implementation of app-based business transactions.

Regarding strategic capabilities, Bank has focused on achieving an advantageous position through the creation of novel products to develop new markets. Specifically, strategic capabilities were observed to facilitate the development of financial products to support green production and consumption systems. Additionally, Bank has made use of its reputation through brand management and striking publicity campaigns, which have enabled the company to achieve an important level of acceptance and memorability in the Colombian financial market (Pineda Rojas, 2014).

Financial capabilities were observed to support risk investment for the development of novel products, such as green lending and green bonds. Green lending focuses on the use of green criteria in credit risk evaluation when granting a financial loan. In turn, green bonds have supported the development of smart-climate projects and the financing of new production and consumption systems.

Finally, organizational learning has been present in Bank since it was founded in the 1970s and has increased over the years. Bank has developed its organizational learning

capability by acquiring and developing complementary businesses. Specifically, the company began to operate as a corporation with only one product: mortgage loans for consumers.

Bank gradually started endeavors in new operations through the acquisition of other banks that specialized in personal banking for consumer loans (an acquisition performed in 2005), rural loans (an acquisition performed in 2006) and vehicle financing (an acquisition performed in 2006). Years later, Bank entered the financial market of Central America (an acquisition of operations in 2011) and has continued its expansion ever since, acquiring bank operations in different countries, resulting in horizontal integration (Pineda Rojas, 2014). Bank’s organizational capabilities have been associated with organizational learning as a mechanism to improve operational efficiencies and perform business acquisitions. Finally, the organizational capability of Bank constituted a mechanism to face changing markets, which have increasingly focused on sustainability, especially green processes and sustainable buys.

Table 11. Business Model - Bank

ESA FACTOR	CATEGORY	MAIN FEATURES
BUSINESS MODEL	Dynamic	Supported by financial capabilities *Green Lending. *Green Bonds.
		Supported by strategic capabilities *Financial products for the construction of a green building market. *Finance and promote new production and consumption systems. *Green and reputation positioning. *Green standards settings in the market through the Protocolo Verde initiative.
		Supported by organizational capabilities such as organizational learning. *Eco-efficiency. *Best practices in energy consumption. *Green innovation culture
		Supported by technological capabilities *Eco-efficiency. *Energy efficiency programs in offices and branches to improve operational efficiencies. *Development of criteria for the acquisition of more efficient technologies. *Green products development

c) Manager’s perspective

The founder of Bank holds a Bachelor of Arts in Social Science and earned a Master’s degree in Actuarial Mathematics in 1969. The CEO is Colombian and inherited a small insurance company that he turned into a large business that included financial services. His work experience for more than 50 years has focused on the insurance and financial

sectors. With regard to his profile, the CEO has stated that “to be qualified in human sciences has been fundamental for business management in the sense of handling human relations”.

Influencing factors observed in the manager`s perspective were associated with the individual characteristics of the CEO, which cover his personal values, perspective towards ESA and leadership style.

- Personal values

The CEO exhibits altruism as part of his main personal values when acknowledging his concern about the welfare of people or serving collective purposes.

...“I feel very proud about the culture of the company, the principles and values shared by my employees associated with **respect to others**, honesty, **fairness**, discipline, enthusiasm and good humor” (Camándula, 2014).

Besides, it seems that organizational values of Bank are shaped by CEO`s personal values:

...“Values relate to serving customers and additional stakeholders according to the principles of **equity** and opportunity, offering **maximum respect to others**, cordiality and tolerance” (Bank Sustainability Report, 2018).

- Perspective towards ESA

CEO is fully supportive of some of the initiatives that are considered sympathetic toward social needs, by being attentive to discretionary activities to contribute to social purposes associated with community investments:

“[...] Companies have to worry much more for the entire community. Traditionally, companies have focused on their business and their employees ... I believe that private companies have to look after the municipalities in order to support their development in achieving technological advances”.

In addition, the next statement illustrates how CEO expects that corporate values be shared among the employees of the company

“[...] We have conceived business development at economic, social and environmental level. Today we see the company as sustainable and we feel that our company is very valuable ... business development has occurred because we count on with accountable people that are well prepared, guided by principles and ethical values that we all share in order to grow in a healthy manner.

Next statement reflects that CEO `s leadership style has shaped the firm`s strategy in terms of taking responsibility to support small communities in the regions where Bank operates:

“Today, organization has established different programs oriented toward entrepreneurship and financial education, to teach people from communities how to become independent workers and achieve an efficient management of money”. CEO is also concerned with the quality of education, supporting the training of teachers in a bilingual program to expand the possibilities and social opportunities for children.

- Transformational leadership style

Businesses leaders of competing banks categorize the CEO as a transformational leader:

“The CEO is the symbol of a whole way of doing business in Colombia, in which the concern for values and responsibility for the welfare of people is as important as the generation of profits for shareholders”.

According to a member of the board advisors of Bank, “the work on values and culture has been taken seriously by the companies of the group...The objective is that values be part of the employees’ DNA in all the companies of the group”. An advisor of the Bboard adds: “The CEO works hard in the drafting of principles and values that are then disseminated to different groups”.

The CEO has mentioned, in relation to his leadership style:

“[...] If we match business values with family values, we have a great growth force [...]”

“[...] In companies that focus on services, people are very important because there is close contact with customers. From my point of view, this philosophy is developed by those of us who work within the organization, not necessarily by me [...]”

“[...] If you are the boss, you have to work with others; you cannot do all the work alone. In addition, if you work in a relatively large company, you should consider that those who are going to do the work and those who have the knowledge to do it, they are the people you have to work with” (Junca, 2013).

Table 12 Manager’s perspective -Bank

ESA FACTOR	CATEGORY	MAIN FEATURES
		Support of environmental interest groups.
		Support of volunteer programs in environmental education.

ESA FACTOR	CATEGORY	MAIN FEATURES
MANAGER'S PERSPECTIVE	Societal	CEO looks to contribute to social purposes.
		CEO has supported social causes.
		Support product stewardship initiatives.
		Support the creation of new production and consumption systems.

- *Adoption of the environmental strategy at Bank*

Bank adopted a *green products strategy* influenced by green markets and a green industry in conjunction with a dynamic business model and a managerial citizenship perspective (see Figure 11). The main environmental practices corresponded to green lending, green bonds, energy efficiency and CO2 compensation activities. Green financing propelled the development of the green lending market in Colombia, which has, in turn, facilitated the financing of sustainable buildings and production and consumption systems (PCS).

International credit providers influenced Bank in regard to the development of greener products (i.e., lending and bonds), while its main competitors drove the adoption of green processes (i.e., energy efficiency and CO2 compensation).

A *dynamic business model* was observed in Bank when it exploited new products and market opportunities to maintain its current position as the third largest bank in the country. The dynamic business model favored the adoption of efficient and innovative ways of conducting business, thus triggering process improvements and new product development.

Bank supported its dynamic business models with technological capabilities related to the management of information and communication technologies. For example, Bank has worked on the development of *social innovation projects* such as an electronic pocket to serve people at no cost at the bottom of the pyramid. Additionally, Bank has made an effort to develop products for people with physical impairments (i.e., blind customers) to be a more inclusive business.

Finally, the managers' perspective towards a citizenship focus supported the financing of environmental interest groups and voluntary programs in environmental education, in addition to philanthropic subjects and voluntary social programs. Likewise, the CEO supported the development of inclusive solutions, which have resulted in innovative products and processes. The leadership style of the CEO corresponds to a transformational style in which relationships are organized around a collective purpose

involving charisma and the stimulation of subordinates' ideas and values (Bass et al., 1987; Burns, 1978). His leadership style has inspired employees around a collective purpose aimed at people's respect and wellbeing and the support of social needs. The CEO transformed a small insurance company into a large business group including insurance, construction, financial activities and software businesses (Revista Semana, 2009).

The CEO's leadership relies on the management of relationships to inspire people around a collective purpose for the organization and the stimulation of the values of employees. From the data collected, it could be inferred that his leadership style has played an essential role in the adoption of green products and pollution reduction strategies. Data show a form of leadership in which relationships are organized around a collective purpose through the understanding of social needs and people's needs.

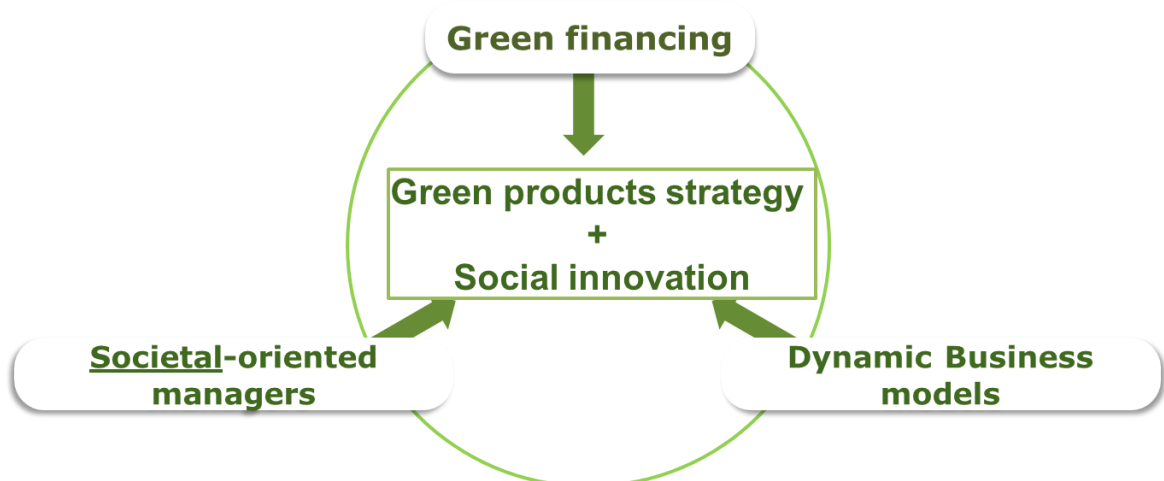


Figure 9 ESA and ESA factors at the Bank.

4.2. Chemical company

Chemical company is part of a multinational group focused on the plastics industry with more than 50 years of experience in the production of pipes. Multinational group operates in four continents and has presence all over Latin America. Company is listed at its local stock exchange since 1979. Company's main business is associated to the manufacturing of pipes for water and sewerage systems. In 2018, Chemical Company reported a turnover of 193 million USD (Lozano, 2019). Additionally, Chemical Company has 19.000 employees who support the operation in the country.

- *Observed environmental strategies*

The environmental practices of Chemical Company were associated with the implementation of *a compliance strategy* that included pollution control, lobbying and reputation management practices in addition to their commitment to social projects, the implementation of *a green processes strategy* and the adoption of industry standards, their participation in voluntary initiatives and sustainability awards.

Pollution control practices corresponded mainly to end of pipe technologies for wastewater treatment plants. Wastewater discharge reduction has occurred consecutively during the last three years and above 10% annually. In relation to residue management, the amount of ordinary waste was reduced by 29% in 2017 (Chemical-Company, 2018).

Lobbying activities have been present at the Chemical Company since its foundation in the early 70's and has helped the Company to create a brand differentiation in the market as a supplier of reliable products. Examples of lobbying activities include working hand in hand with accreditation boards and authorities to propose and implement quality standards and quality seals for its products. In relation to such practices, Company proposes product specifications for standard setting bodies, associations and boards of certification, utility companies and authorities. Additionally, the first quality seal granted by the quality accreditation board in Colombia to any company was approved to the first line of products of Chemical Company in 1971. All these activities have resulted in Company's brand differentiation as a manufacturer of reliable products.

Reputation management practices has included environmental communication campaigns towards communities and general public about operation and product safety (Chemical-Company, 2018). For example, public statements, by the staff, from the chemical company pointed out practices toward communities and general public:

“[...] Company design inclusive policies, by stimulating local employment in nearby communities, developing training programs for employees and their children ... to establish a link between community and the Company [...]”.

Chemical Company has worked in socialization campaigns to show its products as socially focused and water-friendly. Specifically, Chemical Company has developed alliances with communities and authorities to implement environmental and social projects. For example, in 2016, the Company installed a water collection system in an educational farm in partnership with environmental regulators and the municipal government (CECODES, 2017). According to the Company, this practice was implemented to train the community on the importance of the need of a responsible use of water.

Additionally, Chemical Company has developed social projects for low-income communities located nearby their facilities. These projects have included the delivery of technical assistance to municipalities regarding water solutions, environmental education (e.g., giving tips about best practices for water protection) and donation of water pipes and sewerage systems which constitute company's main products (Chemical-Company, 2018).

Implementation of industry standards by the Company included ISO 14001, local product seals and standards of the local Water Company. Additionally, voluntary standards included the subscription of the Company to UN Global Compact principles. Furthermore, Chemical Company has been awarded during more than 15 years with the environmental excellence program granted by the City government. This program annually recognizes leading companies that achieve a remarkable environmental performance in Bogota.

In relation to green processes (i.e. cleaner production practices), Chemical Company has implemented resource-efficiency programs, optimization of operations, preventive maintenance, adoption of low-resource, intensive and cleaner technologies. In fact, the company has recorded several improvements in such pollution prevention practices. For example, water consumption per product weight decreased by 4%; water discharge per product weight decreased by 11%; energy consumption decreased by 11%; and the generation of ordinary unusable waste decreased by 29% (Chemical-Company, 2018). Besides, Chemical Company implemented a pilot program to capture 10 tons of plastic to be recycled as plastic wood (WBCSD, 2018). Finally, the Company supports its cleaner production practices through personnel training, the use of environmental indicators for process monitoring and environmental reporting as business benchmark.

Voluntary initiatives are focused on the development of recreational and cultural activities for communities and have involved more than 1700 employees globally and 200 locally (Chemical Company, 2017b). The beneficiaries of the program has corresponded to communities located under the influence of the company in *Las Hermosas* Canyon (Tolima), San Carlos (Antioquia), Quibdó (Chocó), Buenaventura (Valle del Cauca), Florencia (Caquetá) and an indigenous reservation (Chemical Company, 2017b).

Table 13 ESA - Chemical Company

OBSERVED ENVIRONMENTAL PRACTICES
<ul style="list-style-type: none"> * Adoption of end of pipe technologies * Implementation of environmental communication campaigns * Development of social projects for low-income communities located nearby the facilities of the company
<ul style="list-style-type: none"> * Commitment to voluntary initiatives, industry standards such as ISO 14001, Global Compact, local product seals and local Water Company Standards for pipelines. * Cleaner production and operational efficiency * Participation in green awards * Adoption of parent company guidelines

- ESA Factors

- a) *Business Context.*

The influencing factors observed in terms of the business context corresponded to regulation, public concern about the safety of the product and parent company’s guidelines for the adoption of environmental strategies. Colombian government has stipulated waste disposal rules for manufacturing companies (Chemical-Company, 2018). In relation to that, Company treats wastewater before its discharge, in order to fulfill the quality characteristics required under national laws and regulations (Chemical-Company, 2018).

In addition to regulation, public concern constitutes a key factor for the adoption of environmental strategies: The interviewee expressed that company decisions dealing with environmental issues were influenced by public concerned and the way Company responses to such pressure. Specifically, interviewee stated:

“[...] Stakeholders management in our company consists of: 1) keeping people informed about product safety through different communication media, 2) delivering technical assistance to municipalities regarding water solutions and 3) providing environmental education to children and youth to reach out the community and establish a relation with them [...]”

No environmental practices associated to the imitation of competitors’ best practices were observed in Chemical Company. For example, they have been certified under ISO 14001 since 2002 (ICONTEC, 2017) and have subscribed to Global Compact since 2009 (Chemical-Company, 2015). For its part, the closest competitor, which holds less than 30% of the market, has not yet been certified under ISO 14001 or subscribed to Global Compact until present date. Finally, no evidence was found of sustainability self-reports from the closest competitor until present date, while Chemical Company has reported its environmental performance according to UN principles since 2009. As a consequence, mimetic pressures such as competitors’ best practices did not constitute an influencing sub-factor for the adoption of environmental strategies.

On the other hand, guidelines from the parent company have influenced the adoption of industry standards and their commitment to voluntary environmental programs.

Specifically, global strategies of the parent company focus on energy efficiency programs in conjunction with water and waste management programs and employee participation in voluntary programs related to environmental education. Those practices constitute a general guidance from the parent company to be implemented around the world. Furthermore, voluntary initiatives such as environmental education programs originated from parent’s company initiatives and have raised awareness in more than 19.000 people at the local level about the use of water in a responsible manner (Chemical-Company, 2017b)

CEO has manifested that complete alignment is expected between the strategy of the local company and the strategy of the parent company. For example, in relation to shared value strategy he has exposed the following statement:

“Company decided to locate a plant in such municipality as a way of creating a competitive advantage through territorial development. This project corresponds to a shared value model because it has contributed to generate social and economic development, employment, governance, leadership and social cohesion in the municipality and, in turn, has allowed Chemical Company to operate in an uninterrupted manner for more than 15 years... this case represents the deployment of corporate principles and values”.

Finally, in addition to coercive and normative pressures, the plastics industry is sensitive to the economic situation of Colombia, especially regarding exchange rates and prices of new products (D. Gomez, 2010). This sector is particularly propelled by the expansion of the construction industry and the development of infrastructure projects (Garay, 1998).

Table 15 presents the type of business context observed in Chemical Company.

Table 14 Business Context - Chemical Company.

ESA FACTOR	CATEGORIES	MAIN FEATURES
BUSINESS CONTEXT	Regulation	Waste disposal rules for manufacturing companies.
	Mimetic	No influence from competitors’ best practices or self-reporting activities was observed. Chemical Company holds more than 50% of the market and is leader in the sector with regards to environmental strategy adoption.
	Normative	*Voluntary initiatives, industry standards such as ISO 14001, Global Compact, local product seals and local Water Company Standards for pipelines. *Participation in green awards * Influence of parent company guidelines

- *Business model*

Chemical Company has worked to increase its portion of the market (50% of market share) by developing and positioning its new products and using its R&D capabilities to take advantage of market opportunities. Collaborative R&D has been implemented since 1996 between Chemical Company and *Universidad de los Andes*, in which both parties have been working to develop research projects that contribute to the improvement of the system of aqueducts and sewage in the country through a university chair for civil engineers, consultants and operators. As a result of this collaboration agreement, they have developed more resistant materials and implemented methodologies for the change of aqueduct pipes without breaking the streets (Revista Semana, 2014; La República, 2016).

In a consistent manner, Chemical Company has maintained R&D capabilities over years of operation in conjunction with the improvement of its operational efficiency. For example, the firm encourages employees to identify and implement operational efficiency, relying on ideas and suggestions based on employees' experience and knowledge. Chemical Company developed an Innovative Ideas Program that stimulates employee participation through an incentive plan based on their recognition and economic compensation, which has operated for more than 20 years. Specifically, in 2016 and 2015, the company implemented more than 90 innovative ideas per year, surpassing by 80% those implemented in 2014 (Chemical-Company Sustainability Report, 2018). The Company has constantly used its financial capability for the adoption of cleaner technologies for operational efficiency (i.e. eco-efficiency). Finally, the Company made an investment of 15 million USD in 2019 to renovate its manufacturing technology (Lozano, 2019).

Regarding, strategic capabilities, Chemical Company has focused on achieving an advantageous position through business efficiency. Specifically, the Company acquires companies and creates synergies throughout its value chain to achieve an economically sustainable business (Hernández, 2011). The following statement, taken from the sustainability reports, shows that the business model captures value by vertical integration:

“The business strategy emphasizes the importance of being a vertically integrated company, with focus on special products with the aim of reducing the volatility of raw materials. Hence, we focus on production and marketing towards products with greater profitability and value added”

Table 15 presents a summary of the influencing sub-factors and environmental practices associated to the dynamic business model of the firm.

Table 15 Business Model - Chemical Company.

ESA FACTOR	CATEGORY	MAIN FEATURES
BUSINESS MODEL	DYNAMIC	Company has worked to increase its portion of the market (50% of market share) by developing and positioning its new products and using its R&D capabilities to take advantage of market opportunities.
		<p>Company has developed an Innovative Ideas Program for process redesign.</p> <p>Company has adopted cleaner production technologies to achieve operational efficiency.</p>

- *Manager`s perspective*

The CEO of Chemical Company holds a Bachelor of Science in Engineering. He is Colombian and began to work in the Company in the late 90`s as a sales engineer. He occupied the head of the commercial distribution division in 2000 and in 2008 he became the CEO of the company. His work experience during more than 20 years at the company has focused on sales.

Influencing factors observed in the manager`s perspective were associated with the individual characteristics of the CEO, which cover his personal values, perspective towards ESA and leadership style.

- Personal values

The CEO exhibits self-strain and submission to norms of behavior to keep a smooth interaction with cultural norms, including the rules of the parent company:

“We support transparency and accountability, and therefore commit ourselves to annually report our progress and challenges, in line with the sustainability strategy [...]” (CEO's statement about sustainability, 2016)

In acknowledging his concern about the norms of behavior, the CEO exhibits tradition as one of his main personal values. Traditional modes of behavior become expressions of the CEO`s acceptance of the customs and ideas that firm`s culture imposes on employees. The CEO`s traditional values, associated to self-strain and submission to norms, constituted a mechanism to the support and adoption of global strategies from the parent company:

“[...] In 2016, we consolidated our commitments to ethical principles and corporate values” ...

- Perspective towards ESA

The manager's perspective instituted a mechanism for the encouragement of eco-efficiency programs for the company to be profitable. Next statement illustrates some of the initiatives supported by the CEO:

...“We permanently invest in innovation and state-of-the-art equipment to increase productivity and use efficient machines that demand less energy and water”... (Gómez, 2015).

... “In the area of environmental conservation, we have special savings programs in the consumption of both water and energy ... and also we develop certain projects for the conservation of water [...]”

Besides, CEO stated about the investments in 2019, which confirms his focus on efficiency:

“[...] The company's investments in 2019 sum up 15 million dollars ... [this occurs] because we are in a sector in which we must renew, upgrade equipment and invest in innovation ... in order to be at the forefront of the productive, technological, commercial and distribution processes ...” (Lozano, 2019)

He adds:

“[...] Likewise, we will allocate resources to improve the efficiency of the technological platforms for hydraulic design of water piping systems [...]”

“[...] Another item will be allocated to issues of social responsibility...”

“[...] With regard to the environment, we intend to maintain our competitiveness and at the same time reduce our environmental footprint. We handle resources responsibly in our production processes and bring environmentally responsible solutions to the country. As an active company from a sector linked to water, we invest in research programs for new technologies and hydraulic performance that we subsequently disseminate to our customers and users [...]”

- Transactional constructive leadership style

CEO reflects a transactional leadership style. For example, during a public interview he has mentioned about the guiding principle of firm's decisions:

“Shared value is to make the company successful, responsive to investors, that can operate in the territories under a long-term perspective”. ... As far as the

company creates value for society... you will have better relations with stakeholders. [...]"

The former quote reflects that it is required, by the CEO, a clear set of rules to facilitate the exchange process between the company and the shareholders and interested parties.

The leadership style is a mechanism that supports both the management of the relations with regulators and the investments in communities to introduce new products by achieving win-win deals.

"We support transparency and accountability and, therefore, commit ourselves to annually report our progress and challenges, in line with the sustainability strategy, which seeks to strengthen the economic and competitive growth of the company while promoting the social development of communities. This is managed under strict control of environmental impacts [...]" (CEO's statement about sustainability, 2016).

Finally, CEO adds in relation to the type of initiatives to be supported:

... "The other aspect is social responsibility ... Everything we do in our operation is intended to have good relations with our neighbors, employees and the communities that buy products from us... and to have a good relationship with our shareholders [...]"

Table 16 presents a summary of the influencing sub-factors and environmental practices associated to the manager's perspective of the firm.

Table 16 Manager's Perspective – Chemical Company

ESA FACTOR	CATEGORY	MAIN FEATURES
MANAGER'S PERSPECTIVE	Profits and transactional leadership style	<p>*Support participation of employees in voluntary programs related to environmental education.</p> <hr/> <p>*Support Eco-efficiency and process redesign practices.</p>

ESA FACTOR	CATEGORY	MAIN FEATURES
		* Rewarding communities in exchange for reputation management

- *Adoption of the environmental strategy at the Chemical Company.*

Chemical Company under the influence of public pressure, parent company and authorities adopted an environmental strategy focused in *compliance and green processes*, supported by a dynamic business model and a manager's profits perspective (See Figure 10). Main practices at Chemical Company corresponded to the implementation of end of pipe technologies, environmental communication campaigns, social projects for rewarding communities, cleaner production and commitment to voluntary initiatives and industry standards.

Regulation influenced Chemical Company in regard to the implementation of waste water treatment plants, while its parent company drove the adoption of pollution reduction practices (i.e., cleaner processes and operational efficiency). Finally, public concern about the safe disposal of plastic products and the toxicity of their main components influenced the adoption of environmental practices in order to achieve social license (i.e. environmental communication campaigns and social projects for rewarding communities).

A dynamic business model was observed in Chemical Company when it exploited new products and market opportunities to maintain its current position as the first largest company in the plastics sector. The dynamic business model favored the adoption of efficient and innovative ways of conducting business, thus triggering process improvements and product innovation.

Chemical Company supported its dynamic business model with technological capabilities related to cleaner processes and operational efficiency. For example, Chemical Company has made an effort to adopt energy efficiency initiatives in conjunction with water and waste management practices to gain efficiencies, save resources and be profitable. Additionally, the Company has performed collaborative R&D investments through own and partners' research centers, in order to develop new products for climate change adaptation (i.e. pipe solutions). Firm has capabilities for establishing and managing long and reliable relationships with stakeholders (e.g., associations, boards of certifications, utility companies and authorities) which have allowed Company to apply standard product settings and lead the market.

In relation to the manager's perspective towards ESA, his profit focus supported the investment in product innovation and state-of-the-art equipment to increase productivity. Likewise, the CEO supported the development of water efficiency solutions, which have

resulted in innovative products and processes. The CEO’s perspective fostered the initiatives related to business efficiency, in order to close the loop of materials and perform horizontal integration. Business efficiency was assumed among complementary businesses to manage product lifespan and gain efficiencies along the value chain.

In addition to the CEO’s profit focus, he has been attentive to discretionary activities to reach out people in the communities and establish a close relation with stakeholders in order to achieve a reputation as a responsible company. His concern about behavioral norms has supported both the culture of the firm over time and the abidance by the parent company’s guidelines towards the development of social programs. Specifically, the CEO has supported the participation of employees in voluntary programs (i.e. environmental education) focusing in the surrounding communities that are located nearby the facilities, which has fostered the implementation of additional social plans in conjunction with the municipality government.

Evidence shows that the leadership style of the CEO corresponds to a transactional constructive style in which a manager uses a clear set of rules to facilitate the exchange process between the company and the shareholders and interested parties. His leadership style has focused on the management of relations with regulators and investments in communities to introduce new products achieving win-win deals. For example, the CEO fully supported some initiatives that are considered sympathetic toward stakeholders’ management, through their participation in government’s projects that provide water solutions for communities where the Company can allocate its products. From the data collected, it could be inferred that his leadership style has played an essential role in the adoption of compliance, resource-efficiency and exchange reward strategies.

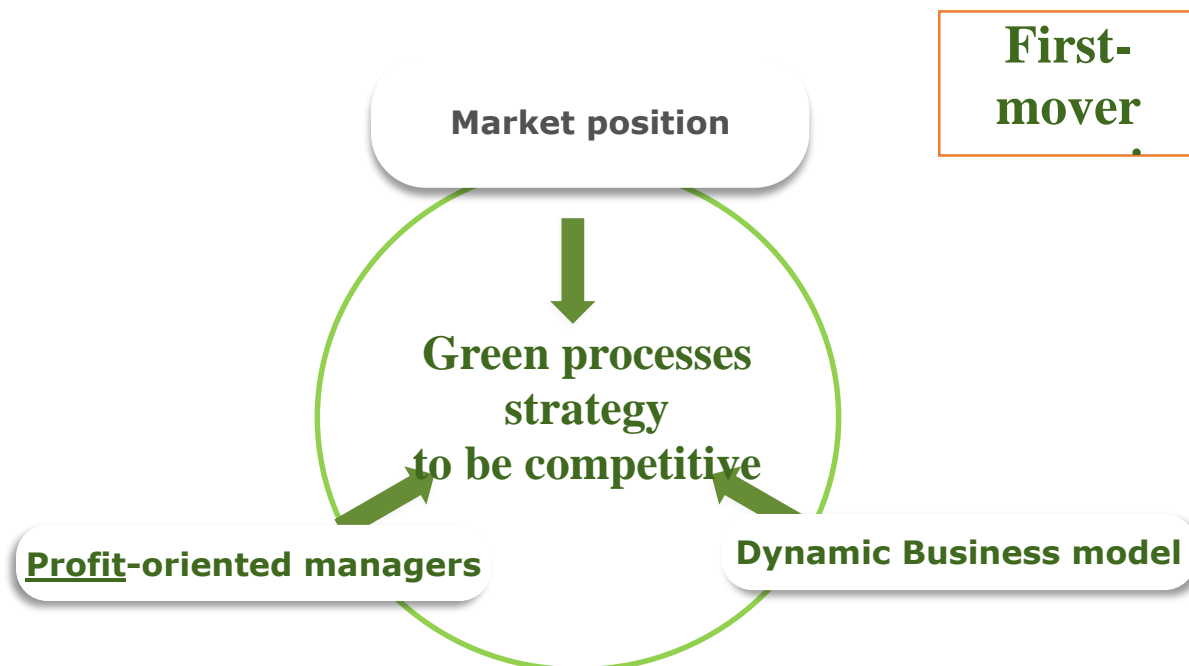


Figure 10 ESA and ESA factors at the Chemical Company.

4.3. Utility company

Utility company is a private and foreign company that generates, distributes and commercializes energy in different parts of the world. The company operates and maintains energy infrastructure in Colombia (e.g., dams and thermal plants) and sales and supplies energy all over the country. Utility company operates in the five continents and has presence in several countries of Latin America. Company reported an EBITDA for 466 million Euros in 2018 (Rodríguez, 2019) and has 6.000 employees who support the operation in the Country.

A subsidiary of the company was created in 1997 when “the [Colombian] law allowed private investors to buy public electricity companies” (Cavaliere et al., 2007) and private investment was allowed for managing energy generation plants (El Tiempo, 2005). Sales of public electricity companies was triggered by the economic difficulties of the electric sector in the late 90’s in Colombia (Cavaliere et al., 2007). Nowadays, the Utility Company maintains its participation in the market with 13 plants for energy generation along the country. Finally, three different international investors have bought the former subsidiary company over the last 20 years.

Utility Company operates under an oligopolistic structure established by the Colombian government, wherein three companies have a moderate concentration of the market in order to avoid an advantageous position of any of them.

- Observed environmental strategies:

The environmental practices observed at the Utility Company were associated with a *green processes* strategy (i.e. adoption of industry standards and pollution prevention practices) in addition to their commitment to compliance for the fulfillment of environmental regulation to develop energy generation projects (i.e. licensing for projects, application for mandatory permits, substitution of restricted materials, social initiatives required by law and pollution control and of voluntary programs in addition to their engagement in lobbying activities and alliance building with governmental organizations).

Green processes strategy included pollution prevention practices associated to the optimization of operations and the implementation of preventive maintenance. Additional practices included the adoption of GRI guidelines for self-reporting and the implementation of ISO 14001 standards. Additionally, in 2016 the Company received the CSR award granted by ANDESCO (National Association of Utility Companies). Such environmental excellence award recognizes companies that achieve a remarkable CSR performance in Colombia.

In relation to their commitment to *compliance*, Utility Company obtained, in 2009, the approval of the environmental license required to develop its more recent energy generation project in Colombia (Utility Company, 2013). To comply with the request of the local authorities, Company prepared an environmental management plan to cover mitigation, correction, prevention and compensation measures for the environmental aspects identified for the implementation of the project. On a daily basis, the environmental strategy of the company includes the fulfillment and renewal of environmental permits related to landfill use, forest exploitation, water usage, emissions and water concessions to perform energy generation projects while mitigation measures included the decontamination of reservoirs (Utility Company, 2016b).

It was also possible to observe the substitution of toxic materials by the acquisition of power transformers that use PCB-free oil, in order to comply with the Colombian environmental regulation. In 2016, Utility Company replaced 93 PCB-oil transformers and implemented the decontamination of 164 transformers (equivalent to 65 tons) in the same year using the ultrasonic washing technique (Utility Company, 2016b). In 2017, the company continued with the decontamination of transformers, retiring an amount of 4.7 tons of PCB oil (Utility Company, 2017). In 2018, the task continued, allowing to withdraw 25,17 tons of solid material and 9,63 tons of PCB oil from 71 transformers (Utility Company, 2018). The acquisition of PCB-free-oil power transformers was carried out in response to Resolutions 222 of 2011 and 1741 of 2016 of the Colombian law, enacted by the Ministry of the Environment, which focuses on the environmental management of PCB-contaminated equipment and waste.

In addition to environmental regulation, the power sector pays an environmental tax that corresponds to 6% of the value generated by hydro-electric power and 4% of the value generated by thermal plants (Velez, 2012). Utility Company is required by law to invest 1% of the value of its projects in social initiatives located in the region surrounding the facility (Velez, 2012). The social initiatives of the organization were found to be related with the construction of infrastructure to benefit communities (e.g., park remodeling and the construction of bridges and schools), promotion of sports and cultural activities in municipal festivals and the development of reforestation and environmental education programs, emphasizing the use of energy in a responsible manner (Utility Company, 2018).

In relation to lobbying activities, Utility Company has raised petitions in conjunction with industry associations to avoid the impact of regulation over the industry (Utility Company, 2016b). On the other hand, Company has decided to form alliances with the local government to launch a program to promote the use of electrical cars. Furthermore, Company structured a partnership with a car-sharing company, to set an electric-car rental offer on an hourly or daily basis.

Reputation management was assumed through socialization campaigns intended not only to present the company as environmentally and socially focused, but also for the management of relations with stakeholders to position the company before the community. Utility Company has also developed workshops to support the environmental programs of educational institutions and has trained ecological groups and social actors on the management of solid waste and the handling of agrochemicals (Utility Company, 2018).

Table 17 ESA - Utility Company

OBSERVED ENVIRONMENTAL PRACTICES
<ul style="list-style-type: none"> * Environmental management plans to satisfy the requirements of environmental licensing * Application for mandatory permits * Substitution of restricted materials * Participation in social initiatives required by law * Pollution control for the control of air emissions and the disposal of hazardous materials. * Adoption of industry standards (e.g. UN Global Compact, GRI Guidelines and ISO 14001) * Participation in voluntary programs * Implementation of practices to achieve efficiency in resource management through housekeeping and preventive maintenance * Engagement in lobbying activities * Forming of alliances with governmental organizations and private companies to foster electric mobility * Support for educational programs related to environmental and energy matters. * Support for employee participation in voluntary programs related to social activities. * Support for social entrepreneurship such as fish farming, agricultural and livestock projects in the surrounding communities of the facilities of the company.

- ESA Factors

- a) *Business context.*

Coercive pressures such as *environmental regulation* and *community pressure* constituted an influencing factor for the adoption of environmental strategies in the Company, which installs its power plants nearby environmentally sensitive areas. Company is subject to environmental licensing and the supervision of authorities in order to develop plans for managing the impacts originated in the development of infrastructure and the execution of energy generation projects.

Hearing processes and informed consent occur mainly in industry sectors in which there is a plan to develop projects associated to the exploitation of natural resources, which is the present case (G. Rodriguez, 2014). On top of local authorities, social license constituted a key mechanism to propel the development of social projects. Social license has been exerted by farmer communities located near to the facilities of the company. “For Utility Company it has always been a priority to keep users informed in a timely and efficient manner about our innovative focus and sustainable management” (Utility Company, 2018). As an example of the activities conducted by the company to comply with the law and compensate nearby communities it was found the following statement:

...“Due to Water Hyacinthus⁷ bloom in the dam ... company identified a practice to compensate communities... Company researched [about this problem] and found that this [aquatic plant] could be used for paper production... Company involved single mothers in the project, in conjunction with employees of the firm... This practice involved two benefits: protection of single mothers and decontamination of the dam”. (Barrera, 2015)

⁷ Water Hyacinthus is a free-floating perennial plant (TexasA&M, 2017)

Normative pressures such as parent company guidelines also constituted an influencing factor for the adoption of environmental strategies. Being part of a holding group has led the local company to incorporate some parent company guidelines into the local operation through occupational health programs and corporate governance (Utility Company, 2018).

There were not observed environmental practices associated to imitation of competitors' best practices. For example, they have been certified under ISO 14001 since 2004 (BVQI, 2004) and subscribed to Global Compact since 2004 (Utility Company, 2015). In the meantime, its closest competitor in energy operations was certified under ISO 14001 nine years later (Competitor, 2013) and subscribed to Global Compact in 2006, two years after Utility Company (Competitor, 2018)

In 2016, Utility Company was the number one in the power generation business, achieving a small advantage over its main competitor. In fact, Utility Company holds 19.9% of the market, while its main competitor holds 18.46% (Utility Company, 2016a). The power generation sector in Colombia operates under an oligopolistic structure wherein three companies have a moderate concentration of the market (Moreno et al., 2014), including the case under analysis.

According to the requirements for the execution of power projects, companies must comply with the same requirements for environmental management plans in order to win the bid. Because of that, there is no significant difference in the environmental practice proposals among the companies that compete for this type of projects. Table 19 shows a summary of ESA factors found at the Business Context dimension.

Finally, in addition to coercive and normative pressures, the power industry is sensitive to climate variability. Due to reliance on hydraulic availability and exposure to scarcity during dry periods (e.g., *El Niño* phenomenon), the power sector relies on the rainfall regime. Colombia is supported on hydropower generation (77%) and thermal generation plants (18%) (CREG, 2006). In order to counter the risk of supply shortages, Colombian regulators have implemented a financial scheme to cover the energy generation costs during dry periods through alternative sources, mainly coal.

Table 18 Business Context – Utility Company.

ESA FACTOR	CATEGORIES	MAIN FEATURES
BUSINESS CONTEXT	Coercive	* Environmental licensing and general operation requirements imposed by regulators. *Social licensing from farmer communities located nearby company facilities.
	Mimetic	Competitor's best practices were not observed.
	Normative	Industry standards such as UN Global Compact principles, GRI guidelines and ISO 14001 standards.

b) *Business model:*

Utility Company exhibits *a stable business model* when it has kept its portion of the market through business efficiencies, while fulfilling requirements for legal and social legitimacy. Company relies on a capital and technology intensive business to keep its portion of the market under an oligopolistic structure established by the Colombian government, wherein three companies have a moderate concentration of the market in order to avoid an advantageous position of any of them.

Company counts on a long and worldwide experience in the development of power infrastructure and management of power plants around the world. The business model is supported by lobbying and financial capabilities, technical know-how and stakeholder management.

Lobbying and financial capabilities has supported the business model in terms of risk management, through the development of specific practices such as environmental plans to fulfill regulation, environmental litigation and lobbying activities to buffer regulation impact, and the substitution of toxic materials restricted by law through the adoption of technologies to comply with regulation (e.g., PCB-oil-free transformers).

In conjunction with financial capabilities, Utility Company has used its previous experience around the world for energy trading and buying of companies and infrastructure to operate. The firm has completed strong investments in infrastructure relying on its financial capabilities and previous technical know-how in order to gain business efficiencies and notable rents, thus keeping its market position and fencing-off competitors.

Technological capabilities were found to be related not only to technical know-how for the development of power facilities intended to achieve business efficiency, but also for the development of preventive maintenance to avoid operation emergencies.

Stakeholder management has supported the development of alliances between the company and local authorities and other market players, in order to foster electric mobility in Bogota. Additionally, stakeholder management has supported the implementation of socialization campaigns to present the company as a responsible and socially focused brand, by investing in communities to introduce the projects of the company. Finally, stakeholder management has supported the establishment of relations with communities in order to achieve social license to operate, by constructing win-win deals offering communities access to electricity. Environmental communication has focused on the delivery of information to employees, in order to both raise awareness about the importance of environmental protection and support the use of environmental indicators for process monitoring.

Table 19 presents a summary of the influencing sub-factors and environmental practices found in the Business Strategy of Utility Company.

Table 19 Business Model - Utility Company

ESA FACTOR	CATEGORY	MAIN FEATURES
BUSINESS MODEL	STABLE	*Lobbying capabilities in conjunction with industry associations to buffer the impact of regulation over the industry.
		* Technological know-how for the development of power facilities intended to achieve business efficiency.
		*Alliances with government to socialize and foster electric mobility strategies, which is their main business.
		*Stakeholder management to establish relations with communities in order to achieve social license to operate, by constructing win-win deals offering communities access to electricity

c) *Manager’s perspective:*

The CEO is a Bachelor in Business Administration and holds a Master's Degree in Management. Since 1997, he moved on to Colombia to work for the Utility Company, where he has held the following positions: Comptroller, Planning Manager, General Manager and CEO. Finally, CEO has more than 20 years of experience in financial investment, planning, control and management.

Influencing factors observed in the manager’s perspective were associated with the individual characteristics of the CEO, which cover his personal values, perspective towards ESA and leadership style.

- Personal values

The CEO spoke about the restraint of actions and impulses and respect for the norms when asked about the most important characteristics of a good leader. In acknowledging his concern about self-restraint and respect for the norms, the CEO exhibits conformity and tradition as his main personal values. Traditional modes of behavior become expressions of the CEO’s focus on a body of customs taking the form of norms of behavior:

... “A good leader must have the following attributes: patience and communication... sometimes you want to implement things immediately but

those things take time ... it is important, then, to process all the information you hear and always to have a lot of patience ... the most important things are: **do not act hastily**, know how to listen, **reflect before you act** and surround yourself with a **trustworthy team** including collaborators known to be as **people of integrity**
“... ”

CEO defines himself as a patient person, a good listener with common sense for making decisions and a very intuitive person to build a team work for his company (M. Rodriguez, 2017)

In an additional statement, the CEO enunciated:

“[...] Our way of working is based on ethical principles, transparency, inclusion, [workers] safety and respect for human rights [...]” (CEO, 2016).

The previous statements fulfill the motivational goals of conformity and traditional values exposed by Schwartz (1992), such as respect (e.g., respect for human rights), commitment (e.g., worker safety and propending for a satisfactory work environment) and acceptance (e.g., inclusion).

Recently, in an interview with a journalist from a local newspaper, the CEO mentioned, when asked about the reasons to work in sustainable energy sources (Semana, 2018):

“[...] the company has defined three major work objectives to apply worldwide: one has to do with growing urbanization; the second one focuses on decarbonization and the third one is related to the demand on electrification, which seeks to use more and more electricity in industry, in the transportation matrix and in homes” ...

“[...] In those three goals, renewable energies play a transversal role” ...

The previous statement shows that the CEO totally supports the parent company’s guidelines in sustainability matters. Besides, the personal characteristics of the CEO instituted a mechanism for the adoption of parent company’s strategies and have allowed him to keep a smooth interaction with the firm’s cultural rules. Furthermore, the CEO hasn’t been affected by the last three changes of investors that Utility Company has had during the 20 years of the history of the Company in Colombia.

- Perspective towards ESA

CEO’s perspective towards ESA focuses on *compliance*, which implies the satisfaction of environmental advocates such as regulators and communities. For example, the CEO specified in one of the local newspapers: “We accept that we must work on the decontamination of the reservoir... but what we do not agree on is that they sanction us and impose measures to carry on a solidarity that does not correspond to us”.

Additional practices included the support of environmental practices related to ecological restoration plans. Finally, in relation to those environmental practices the CEO expressed the following sentiment:

... “Companies can make investments to improve the quality of life from communities where the projects are to be developed ... I always look for ways to make the development of these projects compatible with the care of natural resources and the protection of communities”... (M. Rodriguez, 2017).

Interviews conducted by the researcher confirmed that the manager has a compliance attitude towards CSR. Specifically, the respondents mentioned their mechanisms of compensation for the communities nearby:

“[...] One of the practices is related to the search for an alternative use of the river duckweeds... The company involved single mothers in a social project, in order to use the duckweeds as inputs to produce paper [...]”

- Leadership style

The leadership style of the CEO corresponds to a transactional one, because he manifests reciprocity between agents through an exchange process. For example, the CEO mentioned in a recent interview: “[...] it is necessary to develop a clear regulation for the referendum of the projects, so that they are not impeded by communities [...]” The former quote reflects that it is required, by the CEO, a clear set of rules to facilitate the exchange process between the company and the influenced communities.

Recently, in an interview with a journalist from a local newspaper, the CEO mentioned, when asked about their current activities with nearby communities (Semana, 2018):

... “In each project it is posed, in a very specific way, how to mitigate the impacts that can be created, because each project is different [...] We have programs aimed at the resident population: we gave them a house and five hectares to develop productive projects [...] Besides, for the people who worked in the area, an initiative was developed to train entrepreneurs and deliver a seed capital [...] These initiatives occur because [we want to run] a sustainable business in the long term” ...

Specifically, this type of leadership emphasizes the clarification of goals and desired outcomes, maintaining the *status quo* for as long as requirements are being met. For example, the CEO defines his responsibility model as successful because “... it is based on the deep and real knowledge of the communities and stakeholders they work with ...” (Gerente, 2014).

According to different statements from the CEO it is observable that his transactional leadership style institutes a mechanism for the development of social responsibility plans, to be able to do business and introduce power solutions. For example, the CEO mentions

about the management of relations with communities: “The electrical development is totally compatible with the environmental care and the development of communities” ...

Finally, leadership style of CEO reflects his favorable support of operational efficiency, improvement of quality in services and acquisition of up-to date technology:

“...We expanded the coverage of the electricity market in Bogota after the merger of our company with a local regional Company and reached more than 3 million customers [...] Another achievement is the improvement of the quality of the service. Last year we closed with ten average interruptions (820 minutes), a 13 percent improvement, which is a significant advance with respect to the indicators of 2016 [...] In terms of generation, I would highlight the modernization works in the plants, which have resulted in better levels of quality and care for the environment” ...

Table 20 presents a summary of influencing sub factors and environmental practices found at the manager’s perspective of Utility Company.

Table 20 Manager’s Perspective - Utility Company.

ESA FACTOR	CATEGORY	MAIN FEATURES
MANAGER’S PERSPECTIVE	Compliance attitude towards ESA and a transactional leadership style	<ul style="list-style-type: none"> *Support of educational programs related to environmental and energy matters. *Support of employee participation in voluntary programs related to social activities. *Support of a good work environment. * Support the control of air emissions and the disposal of hazardous materials. *Support of environmental conservation programs. *Support the elimination of hazardous materials from supplies.

ESA FACTOR	CATEGORY	MAIN FEATURES
		*Support of social entrepreneurship such as fish farming, agricultural and livestock projects in the surrounding communities of the facilities of the company.

- *Adoption of the environmental strategy - Utility Company.*

Utility Company adopted an environmental strategy focused in *green processes* (i.e. adoption of industry standards and pollution prevention practices, housekeeping and maintenance) influenced by policies of the parent company. In addition to former strategy, there was observed their commitment to compliance influenced by local authorities (see Figure 13). The main environmental practices, in relation to compliance, corresponded to the fulfillment of environmental regulation for energy generation projects (i.e. licensing for projects, application for mandatory permits, substitution of restricted materials, social initiatives required by law and pollution control), in addition to their engagement in lobbying activities and alliance building with governmental organizations.

Authorities and community's pressure influenced Utility Company in regard to *environmental and social licensing* in order to deal with the impact of the infrastructure constructed for power generation projects (i.e., environmental management plans and social projects in nearby communities). Community's pressure occurs because of the perceived impact of energy infrastructure (e.g., dams) on the fishing and agricultural activities of communities living next to the projects (El Tiempo, 2016). Additionally, parent company drove the adoption of pollution reduction practices (i.e., cleaner production) and their commitment to environmental standards and guidelines (i.e. ISO 14001 and UN global compact principles). In opposition to authorities, parent company and community's pressures, competitors do not have a relevant influence in the adoption of environmental strategies.

A *stable business model* was observed in Utility Company by keeping its portion of the market through business efficiencies, while fulfilling requirements for legal and social legitimacy. The stable business model favored the adoption of secure ways of conducting business, in terms of risk management, through the development of environmental plans to fulfill regulation, environmental litigation and lobbying activities to buffer regulation impact, and the substitution of toxic materials restricted by law. Specifically, the firm deploys resources through policy, interaction with NGO's and lawyers who work for the management of the environmental issues of the company. Besides, the firm has worked

in the management of its reputation and the use of socialization campaigns as socially focused.

Utility Company supported its stable business models with its technical know-how for the management of business and achieve effectiveness in the management of resources. For example, Company has used their technical know-how in the development and maintenance of power facilities around the world intended to achieve business efficiency. Additionally, Company has made an effort to adopt safety measures for people protection in order to be a more secure business.

Financial capabilities have supported high investments in infrastructure and the use of outsourcing practices for power plant operations while stakeholders' management (e.g., communities, market players and authorities) has allowed the Utility Company to develop alliances with authorities and market players in order to foster electric mobility in Bogota. Previous capabilities have helped the company to achieve shareholder satisfaction while at the same time controlling legal and reputational risks.

Finally, the influencing factors, at the manager's perspective dimension, have been associated to the manager's traditional and conformity values, a compliance responsibility focus and his transactional leadership style. The CEO's concern about conformity and traditions has supported the firm while focusing on shareholders' satisfaction, management of relations with regulators and communities, all of which has resulted in the branding of the company and the maintenance of its portion of the market. The traditional and conformity values of the CEO propelled the participation of employees in voluntary programs related to social activities and supported the execution of programs related to environmental education.

Additionally, the CEO's perspective towards compliance has supported the adoption of parent company's practices, the use of reward and recognition to keep relations with nearby communities and the adoption of mitigation programs for biodiversity restoration. Finally, the manager's leadership style supported business acquisitions, purchase of technology updates and fostered the initiatives for electric mobility in the city through the integration of different market players and regulators.

The theoretical model of the present work was applied to the Utility Company. The way in which the influencing factors shape the adoption of environmental strategies in the Company is outlined in Figure 11 and explained below.

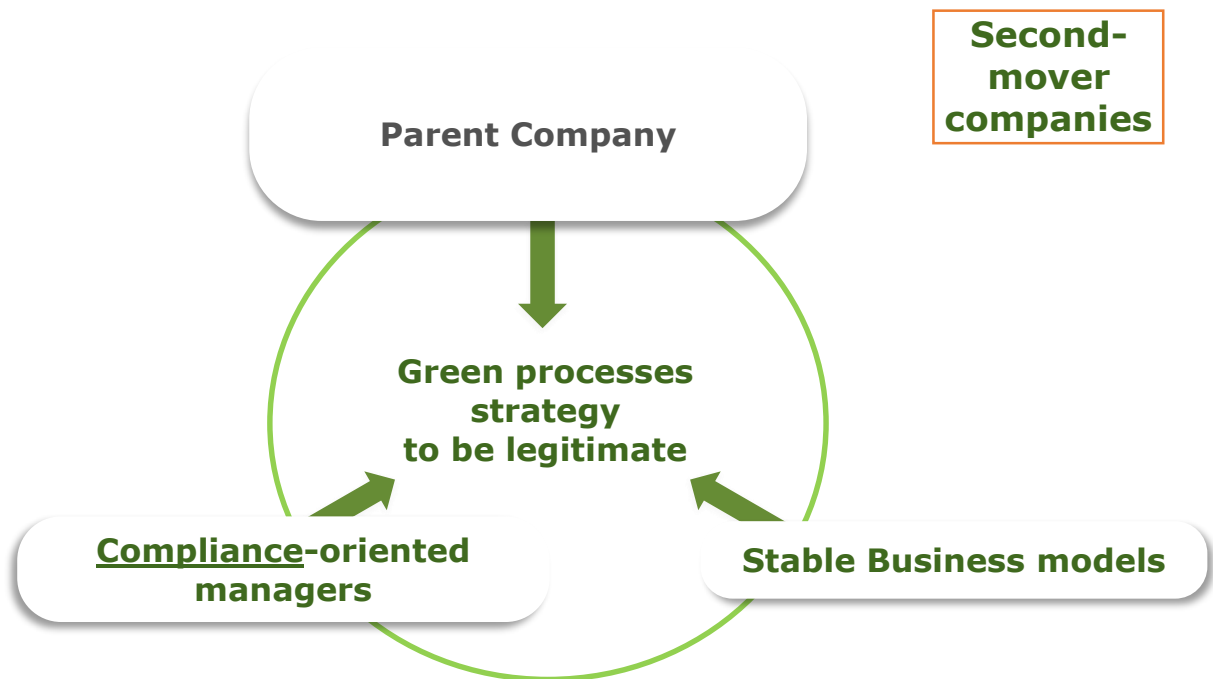


Figure 11 ESA and the ESA factors at the Utility Company.

4.4. Oil & Gas Company.

Oil and Gas Company started as a publicly-held company in 1951 and since 2003 it became a public stock-holding corporation (88% state-owned). The Company focus on upstream and midstream operations in the oil, natural gas and energy industry. The firm is listed at NYSE since 2008 and has been included in the Dow Jones Sustainability Index. Oil & Gas Company reported a net profit of 3.7 billion USD in 2018 (Chiquiza, 2019) and has 20.000 employees who support the operation in the country.

- Observed environmental strategies.

The environmental strategies of Oil & Gas Company were associated to *green processes* strategies in addition to their commitment to *compliance*, social projects and voluntary programs, environmental reporting and support for environmental conservation programs.

Green processes strategy included practices associated to processes improvement and the implementation of closed loops. Processes improvement was performed through the use of environmental indicators for process monitoring and the implementation of actions to increase oil refining efficiency. Additionally, the company implemented closed loops for gas in plants and fields in addition to re-circulation of rainwater for domestic and firefighting systems. Company, also injected wastewater in wells as a discharge mechanism.

Compliance strategy included practices associated to environmental license such as environmental impact assessments, preparation of environmental management plans, mitigation and compensation activities, establishment of effective relations with regulators, dialogues with communities to inform about the environmental impacts of projects, substitution of restricted materials and renewal of permits associated to the use and exploitation of natural resources. Specifically, CO₂ compensation practices were performed through forest plantations and substitution of restricted materials were related with the development of diesel with a less amount of Sulphur, in compliance with resolution 182087 (*Resolución 182087*, 2007; G. Rodriguez, 2014).

The development of social projects included educational programs in culture and society, co-financing of infrastructure and public utilities, financing of social entrepreneurship and support of rural development projects. The educational programs covered the training of personnel from municipalities where the company operates, in order to build the ability to manage social and environmental projects and evaluate and preserve endangered species of special interest. Additionally, in relation to public utilities, Oil & Gas Company has co-financed projects focused on the improvement of the basic sanitation conditions of communities, contributing to the wellness of people and ecosystem conservation and protection. The company has co-financed social projects in low-income communities located near to the facilities of the firm, reaching investment values of 5.9 million USD in 2017 and 14.5 million USD in 2018.

The adoption of industry standards included ISO 14001, AA1000 and ISO 26000, in addition to their commitment to reporting initiatives according to the GRI guidelines. Oil & Gas Company adopted voluntary programs such as UN Global Compact principles, the

CEO Water Mandate and voluntary principles on security and human rights. Finally, the company participated in green awards such as Green Vendor Rating award, the CSR award and the CSR initiative award.

Reputational strategies included the management of relations with communities for the positioning of the company in the country and the design of a new brand replacing the pre-Colombian figure that represented the company for 50 years, to reflect the sustainability vision of the company. Finally, Biodiversity conservation programs included study and conservation of wetlands, reforestation plans and specific actions in conservation of wild species.

Table 21 ESA – Oil & Gas Company.

OBSERVED ENVIRONMENTAL PRACTICES
* Adoption of compliance practices associated with environmental impact assessments, preparation of environmental management plans, mitigation and compensation activities, substitution of restricted materials and renewal of permits associated to the use and exploitation of natural resources.
*Adoption of pollution reduction practices associated to process monitoring, improvement of operations to achieve efficiency in resource management and the implementation of closed loops (i.e. gas, water and wastewater).
* Reputational practices through the establishment of effective relations with regulators, dialogues with communities to inform about the environmental impacts of projects,
* Support for culture-based educational programs, co-financing of infrastructure and public utilities, financing of social entrepreneurship and support for rural development projects.
* Adoption of industry standards and voluntary programs such as ISO 14001 and ISO 26000 standards and UN Global Compact principles, the CEO water mandate and human rights principles.
*Pollution compensation through the support for environmental conservation programs such as study and conservation of wetlands, reforestation plans and specific actions in conservation of wild species.

- ESA factors

a) Business context

Oil & Gas Company, is ascribed to the Ministry of Mines and Energy and thirty percent of its board members represent the Colombian governmental ministries and administrative departments. The authorities that regulate the company include the Ministry of Mines and Energy, the National Hydrocarbons Agency and the Gas and Energy Regulatory Commission. Additionally, due to its public nature, five different superintendents oversee specific company activities (i.e., public utilities, finance, transport, companies and health) and it is subject to control by the Government Comptroller (Oil&Gas, 2015).

Oil & Gas Company develops its operation through oil exploitation. As a consequence of such condition, the company requires to apply for an authorization, before the National Environmental Licensing Authority, for the use of natural resources. In order to obtain

the environmental license, the Company is required to develop a plan to manage the impacts originated in the development of facilities and the execution of oil extraction projects. On a daily basis, the firm's environmental strategy includes the renewal of the environmental permits associated to forest exploitation, water usage, landfills, emissions and concessions of underground or surface water.

In the case of water use, the law states that “any project requiring an environmental license and involving in its execution the use of water taken directly from natural sources for any activity, must allocate not less than 1% of the total investment to the recovery, conservation, preservation and surveillance of the watershed” (*Resolución 182087, 2007*).

Finally, hearing processes and informed consent occur mainly in industry sectors in which there is a plan to develop projects associated to the exploitation of natural resources, which is the case under analysis (G. Rodriguez, 2014).

In addition to local authorities, communities put social pressure on Oil & Gas Company when it operates in locations that are next to its activities. Besides, the company has presence all over the country and during decades it has executed social development programs.

According to the sustainability reports, the management of relations has been assumed as part of the strategy of the Company to shield the achievement of a profitable and sustainable growth. Because of that, communities expect that their basic needs be solved by the company. For example, Company supports sport activities and gives scholarships to children from rural areas in addition to the financial aid that give to farmers for agricultural projects (Oil&Gas, 2019).

It is also visible in the documents of the Company that its practices are strongly shaped by regulators and communities:

“[...] According to the material analysis carried out by the company, dialogues with communities, water management, pollution emissions and transparency in business constituted the most relevant aspects identified in the analysis...” (Oil & Gas, 2015).

Normative pressures such as voluntary initiatives and industry standards instituted an influencing factor for the adoption of environmental strategies. Specifically, Oil & Gas Company has been committed to voluntary programs, including: UN Global Compact principles, the CEO Water Mandate and voluntary principles on safety and human rights. Besides, the company has adopted industry standards such as: ISO 14001, AA1000 and ISO 26000. Finally, they have been endowed with different awards, including: The Green Vendor Rating award in 2011, the CSR award granted by ACCENTURE in 2013 and the CSR initiative award granted by MERCO and the newspaper “Portafolio” in 2015.

The firm received the Green Vendor Rating award for its green procurement strategy, through which they sought to promote environmental practices in its suppliers. On the other hand, the company has developed a program focused on the recovery of degraded marine environments through the construction of more than 100 artificial reefs that use

obsolete stretches of oil pipelines, which has allowed the company to receive the Accenture prize. Finally, the company was granted the MERCO award because of its ethical practices and transparency of corporate governance.

In addition to coercive forces, it was observed that Company is continuously checking its practices of their main competitor in the Oil & Gas sector. The Company maintains an agreement with a competitor, which they consider exhibiting high performance in the oil industry, for acquiring knowledge about green standards and biodiversity conservation practices. Furthermore, “both companies have signed different agreements to comply with cleaner operations and minimize CO2 emissions (Oil & Gas - Company, 2009).

Oil & Gas Company is the second most profitable oil company in Latin America after its main competitor (Vargas-Vega, 2020). The main competitor is the leader of the market in Latin America and has been ahead of the Oil & Gas Company in environmental practices such as ISO 14001 and self-reporting initiatives (e.g., DJSI). For example, Oil & Gas Company was listed in the Dow Jones Sustainability Index (DJSI) in 2010, after its main competitor in Latin America was listed in 2006. Additionally, Oil & Gas Company was certified under ISO 14001 in 2008 after its main competitor in Latin America was certified in 1997.

In addition to coercive, normative and mimetic pressures, Oil & Gas Company is subject to the variation of the international price of oil and has faced an extent fall of barrel prices since 2015. Specifically, oil prices underwent a considerable drop because of strong growth in OPEC production in previous years. The average barrel prices were \$43.55 USD in 2016, compared to \$52.39 USD per barrel in 2015 and \$98.95 USD per barrel in 2104 (BP, 2016). In response to the oil price crisis, the company developed an austerity plan to reduce investments and reduce costs and expenses, through an operational efficiency focus and the renegotiation of contracts in order to continue with the development of the activity of the firm, thus minimizing the possibility of economic risk.

Finally, in 2017 and 2018, the oil prices recovered almost by 70% of the value lost since 2014. In 2018, the company finds itself going through a good moment of financial strength due to the fact that it has managed its assets to reach equilibrium and has stabilized its profits after the fall in oil prices (the CEO, 2017).

Table 22 presents a summary of the influencing factors and environmental practices found in the Business Context.

Table 22 Business Context - Oil & Gas Company

ESA FACTOR	CATEGORIES	MAIN FEATURES
	Coercive	<ul style="list-style-type: none"> * Requirements from regulators to operate. * Social license from communities located near to the facilities of the company.

ESA FACTOR	CATEGORIES	MAIN FEATURES
BUSINESS CONTEXT	Mimetic	*Main competitor's practices in ecosystem protection and CO2 compensation. *Main competitor's self-reporting initiatives such as DJSI and GRI.
	Normative	Industry standards and voluntary programs such as ISO 14001 and ISO 26000 standards and UN Global Compact principles, the CEO water mandate and human rights principles.

b) Business model

Oil & Gas Company runs a *stable business model* to keep its position in the market by being the only oil refiner and fuel producer in Colombia relying on market opportunities, management of risks and establishing a permanent dialogue with regulators.

In recent years, the company has optimized production, transportation and refining capacity in order to increase the life of crude oil reserves, which means improving the indicator of production vs. existing reserves in the Country (Sustainability Report Oil & Gas, 2016;2017;2018). Because of those capabilities, Colombia reached a peak in oil production (2.4 trillion barrels) and reserve levels (6.3 years) in 2015 (BP, 2016; PWC, 2014). The company controls 95% of the pipelines of the country and the transportation facilities including the shipping of crude oil.

The business model is deployed through financial capabilities, operational efficiencies and stakeholder management.

Financial capabilities supported the Company to perform investments for the development of technological solutions for process optimization. The company has been involved in the optimization of expenses and investments, simplification of business processes and business efficiency.

The organizational capabilities of the firm have been associated to managerial ability and organizational processes to face changing markets. Even, in the case of the oil price crisis, the firm was able to maintain its competitive advantage and deal with external demands from stakeholders. Company's capabilities have supported the Company to secure the market through the optimization of oil refining efficiency and the increase in processes productivity, company branding through a renewed image to reflect its commitment with sustainability and cleaner barrels, management of relations with stakeholders (especially communities and authorities) and the execution of alliances with business partners in alternative energy projects.

Technical know-how supported process improvement for the development of oil production in mature fields, the management of heavy oils and the improvement of oil recovery practices. The company counts with more than 60 patents registered in Colombia, the United States of America, Korea and Indonesia. Those patents are related with process improvement, oil leak detection and monitoring, heavy crude oil extraction

and use of by-products. Technical know-how has improved the amount of oil recovered from wells by using different extraction techniques.

Practices supported in aforementioned capabilities correspond to the development of closed loops in plants and fields for gas and water recirculation, use of rainwater for domestic and firefighting systems and wastewater injection in wells as a discharge measure. Finally, business model has supported the Company in the identification of opportunities for business growth, the upgrade of infrastructure, the strengthening of human talent, advance in a positive work environment and the improvement of the CSR model.

Table 23 presents a summary of the main features observed at the business model of the Oil & Gas Company.

Table 23 Business Model - Oil & Gas Company.

ESA FACTOR	CATEGORY	MAIN FEATURES
BUSINESS MODEL	STABLE	* Operational efficiency and processes improvement to increase productivity and oil refining efficiency.
		* Stakeholder management to prevent grievances that can potentially undermine business performance.
		*Pollution compensation through forest plantations.
		*Use of environmental indicators for process monitoring.
		* Technical know-how for the implementation of close loops for gas, water and wastewater. *Improvement of operations to achieve efficiency in resource management.

c) Manager's perspective

The CEO of the Oil & Gas Company was the head of the firm for 8 years, which has become one of the longest presidential periods in the Company. The CEO holds a Bachelor of Science in Civil Engineering and a Master's degree in Industrial Engineering. The CEO is Colombian and started to work in the company as the CEO. His previous work experience during more than 40 years in the power sector focused on the power

distribution business and the Oil & Gas sector and constituted a leverage to become the president of the Company.

Under his presidency, oil production, oil reserves and transportation of crude oil almost doubled. Besides, the company's assets more than doubled and went from a single owner, (i.e. the Nation), to 397 thousand minority shareholders with the largest issuance of shares in the history of the Colombian Stock Exchange (Rojas, 2015).

Below are the main features of the manager`s perspective associated with his personal values in conjunction with a favorable attitude towards compliance and his inspirational leadership style.

- Personal values

The CEO talks about integrity, responsibility, transparency, honesty and respect for employees when asked about the most important features in a leader:

... “Something of great importance are our values in terms of respect, integrity and responsibility [...] the most important features in business leaders have to do with transparency and honesty ...”

The CEO explains that he promotes respect in the workplace when it comes to religion, sex orientation differences:

... “We seek to respect all kinds of people ... there has been progress [in the company] in this regard ... “to count on with different kinds of people’s attitudes enriches the capabilities of the organization to face new challenges”...

Additionally, he adds in relation to the notion of diversity at the workplace:

... “If you do not have a fully diverse workforce it will be difficult to be more Competitive” ... (PWC, 2015)

Finally, the president of the Board states, in relation to the values of CEO of the Oil & Gas Company:

... “He has been a great business creator throughout his life and a wonderful human being who combines integrity, humility and joy. I see in him unusual qualities for an executive of his stature: optimism, closeness to people, strength, transparency”... (Rojas, 2015)

In acknowledging his concern about honesty and responsibility, understanding and tolerance, the President exhibits benevolence and universalism as his main personal values.

The former statement by the CEO fulfills the motivational goals of benevolence and universalism exposed by Schwartz (1992) such as honesty (e.g., being transparent),

responsibility (e.g., awareness of environmental issues) and acceptance (e.g., inclusion and respect for human rights).

Benevolence and universalism become expressions of the CEO's focus on society, taking the form of concern about the welfare of his personnel.

The practices supported by the president of the company relate with the increase of environmental sustainability awareness. For example, the president has coined the concept of cleaner barrels related to the perform of efficient and profitable operations without occupational accidents and no environmental incidents (Periódico Portafolio, 2013). Besides, in relation to the support given by the CEO for biodiversity conservation programs, company co-financed a project in offshore zones for the protection of the humpback whale in alliance with a biodiversity conservation institute and its main competitors (Trujillo, 2017).

-Perspective towards ESA

The CEO states: "it is undeniable that social and environmental issues are becoming more important, as well as the management of the relationships with stakeholders, the labor force, the authorities ... and this aspect has an impact on the type of management that one has to carry out". The CEO adds: "We have adapted our work practices to the GRI practice [...]" "[...] Besides, we can show significant progress in our relationships with the different stakeholders and we can show that we have increased the amount of our social activities as well as in environmental and social investments."

The former statement suggests that the CEO's perspective toward ESA focuses on compliance with different stakeholders through a dialogue with them for the mitigation of reputational and operational risks and the implementation of a brand positioning strategy as a cleaner, sustainable and social industry. Besides, during the CEO's presidency "the improvement in the quality of fuels registered a great advance for the country in relation to the Sulphur content in diesel and gasoline" (Económica, 2018b), which allowed the Company to develop biodiesel with lesser amounts of hazardous materials.

-Leadership style

The leadership style of the CEO corresponds to a transformational one. A transformational leadership style is one which relationships are organized around a collective purpose involving charisma and the stimulation of subordinates' ideas and values (Bass et al., 1987; Burns, 1978). His leadership style has inspired the employees to strongly commit with their work.

Furthermore, his employees have categorized the CEO as a transformational leader:

... "CEO is a charismatic person and has a good managerial management in terms for carrying out concrete actions...Having a challenging leader in the presidency drives a higher commitment in his employees" ... "For those who know him closely, the main aptitude of the CEO is consistency, which in simple words

means leading by example, to which is added his high degree of commitment and the close and special relationship he has with God, especially when it is about facing with serenity and calm the most complex situations” (Periódico Portafolio, 2011)

Furthermore, the adoption of environmental strategies has been influenced by the leadership style of the CEO of the company:

“The improvement of the quality of fuels is recorded as a great advance for the country: the sulfur content in the Diesel (-50 ppm sulfur) and gasoline (-300 ppm sulfur) is one of the lowest on the continent “(Económica, 2018a).

Finally, the president of the Board adds that the CEO is supportive of sustainable development projects (Periódico Portafolio, 2011). It is palpable that the leadership style of the president of the company was one of the manager’s features to inspire his employees to work to achieve an environmentally responsible company focused on pollution control and environmental conservation. The transformational leadership style was the mechanism to promote the development of the company in terms of greener energy solutions.

Recently, the company has had a change in its top leader in order to focus on the management of the company after the oil price crash in order to maintain their economic indicators in good conditions.

Table 24 presents a summary of the main features of the manager’s perspective at the Oil & Gas Company.

Table 24 Manager’s Perspective – Oil & Gas Company.

ESA FACTORS	CATEGORY	MAIN FEATURES
MANAGER’S PERSPECTIVE	Compliance	* Compliance perspective of the CEO supported the development of reputational strategies through a continuous dialogue with stakeholders for the mitigation of reputational and operational risks
	Transformational leadership style	* Leadership style of the president of the company inspired his employees to work on pollution control and environmental conservation programs.

- *Adoption of the environmental strategy of the Oil & Gas Company.*

The theoretical model of the present work was applied to the Oil & Gas Company in order to portray ESA at the Oil & Gas Company. The way the influencing factors shape the adoption of environmental strategies is outlined in Figure 12 and explained below.



Figure 12 ESA and the ESA factors at the Oil & Gas Company.

Oil & Gas Company under the influence of competitors adopted an environmental strategy focused in *greener processes*, supported by a stable business model and a manager’s compliance perspective (See Figure 12). Main practices at the Company corresponded to the implementation of processes improvement, operational efficiency and closed loops. Additional practices influenced by international competitors were associated to the financial support of environmental conservation programs (i.e. protection of the humpback whale in offshore zones).

Regulation influenced Oil & Gas Company in regard to the implementation of *environmental licensing*, mitigation and compensation activities, substitution of restricted materials and renewal of permits associated to the use and exploitation of natural resources. Besides, communities drove the adoption of *social licensing* (i.e., social projects for the establishment of effective relations with regulators and communities).

A *stable business model* was observed in Oil & Gas Company when it exploited opportunities for business efficiency and market opportunities to maintain its current position as the first largest company in the country. The stable business model favored the adoption of efficient ways of conducting business, thus triggering the upgrading of infrastructure, the strengthening of human talent and the improvement of the work environment.

The company has kept its position as the only oil refiner and fuel producer of Colombia through the exploitation of business opportunities, simultaneously minimizing risks, managing a permanent dialogue with stakeholders, improving the process of obtaining

environmental permits and implementing concrete actions to strengthen inter-institutional relationships.

Company supported its stable business model with business capabilities associated to business efficiency and stakeholder management. For example, business efficiency has allowed the company to get involved in the optimization of expenses and investments, simplification of business processes and operational efficiency. Additionally, the Company has been able to secure its market share through the optimization of oil refining efficiency and the increase in process productivity, energy efficiency and reuse of water. Firm has capabilities for establishing and managing long and reliable relationships with stakeholders especially communities and authorities which have allowed Company to interact with stakeholders for enabling the projects and operations of the Company.

In relation to the manager's perspective towards ESA, his compliance focus supported the relations with stakeholders and the mitigation of reputational and economic risks in conjunction with the substitution of toxic materials restricted by law. Likewise, the CEO, of this state-owned firm, supported the development of social and biodiversity conservation projects. The CEO's perspective fostered the initiatives related with business efficiency, in order to close the loop of materials (i.e. water recirculation) and perform partnerships for the evaluation of alternative energy initiatives.

In addition to the CEO's compliance focus, he has been attentive to discretionary activities for reputational management and establish close relations with people in the communities and establish a close relation with stakeholders in order to achieve a brand positioning strategy as a cleaner, sustainable and social company.

4.5. Agri-business association.

The Association is focused on the agricultural commodity business and represents almost 500.000 farmers around the country. It is an association founded and funded by Colombian farmers. It provides support for its farmers in terms of improving quality and operational costs in addition to their life quality. The Association reported revenues for more than 85 million USD in 2018, and runs a total of 370 stores in 16 countries.

- Observed environmental strategies.

The environmental practices observed at the Association were related with *green products* (i.e. certification of organic products) in conjunction with the implementation of sustainable agricultural practices, *green processes* (i.e. reduction of water consumption and wastewater disposal, cleaner technologies and processes optimization) and the adoption of industry standards in addition to their engagement in environmental conservation initiatives and the implementation of climate change adaptation strategies.

The certification of organic products included rainforest Alliance, UTZ, and 4C certification, among seven different sustainability protocols. Product certifications have allowed the company to both deliver value to local farmers and access and maintain its products in new markets that have an increasing demand for organic foods and sustainable practices. Since its foundation, the Association has subscribed to high quality and organic product standards to create brand differentiation in the international market. Finally, Company has managed its brand as a socially focused organization which has helped it to position its premium agricultural product.

In relation to the certification of organic products, the CEO mentioned during the balance of his presidency of the Association:

... “The strategies gave the following results: currently, 197.000 farmers have been certified or verified for the sustainable production of the product... and ... in the last six years, an additional income of around 60 million dollars was generated for the benefit of the coffee growers and their families” ...

Industry standards included the adoption of ISO 14001 for innovation in their products and processes, together with the adoption of fair trade seals to benefit agricultural producers located at the end of the supply chain.

Climate change adaptation strategies included the establishment of a smart agricultural practice for developing new crop varieties that counter climate change. In order to do that, the Association created a research center for evaluating different agricultural practices to deal with climate change phenomena.

The Association implemented agricultural best practices through water management, green R&D and the involvement of the farmers in the adoption of pollution reduction

practices. Sustainable practices included, for example, a dry depulping process to reduce water consumption and wastewater disposal, cleaner technologies and processes optimization.

Practices for environmental conservation were related to reforestation and the protection of soil and water systems, including the preservation of wetlands along the agricultural zone. The biodiversity program became a complementary environmental business for the Association, by providing an environmental service.

Table 25 ESA – Agri-business.

ENVIRONMENTAL PRACTICES
* Certification of organic products through R&D investments
* Adoption of industry standards (i.e. ISO 14001) and sustainable agricultural practices such as rainforest Alliance, UTZ and 4C certification.
* Engagement in environmental conservation initiatives through reforestation and protection of soil and water systems
* Pollution reduction through water and energy management and implementation of best agricultural practices (i.e. cleaner technologies).
* Implementation of climate change adaptation strategies, reduction of water consumption and responsible wastewater disposal.
* Brand positioning by offering an organic agricultural product and by incorporating social projects with marketing activities

- ESA factors.

a) *Business context:*

Mimetic and normative pressures were observed as influencing factors for the adoption of environmental strategies.

Mimetic pressures such as main competitor practices instituted an influencing factor for the adoption of environmental strategies. In an interview with a local newspaper, the manager of the Association’s distribution channel mentioned that the “arrival of competitors had not affected them but, on the contrary, forced them to improve the standards” (Medina, 2015). Besides, the main competitor has implemented several initiatives to reduce the environmental impact of disposable cups such as “the first glass of recycled cardboard paper for hot drinks in the sector “launched in 2006, while the Association started its initiatives to reduce the environmental impact of disposable cups in 2018 through the “reusable cup program” (Bolaños, 2018; Diario del Sur, 2018).

In relation to the mimetic pressures, the sustainability officer mentioned to the researcher: “the business environment changed and after evaluating the strategy of their main competitor, the farmers realized that there was an opportunity to capture great value on the other side of the chain”. ... “The change in the business environment was the main motivation for rethinking the Association’s objective” ...

Additional examples of mimetic pressures included climate change strategies associated to establishing smart agricultural practices. In this sense, the main international competitor started to implement a climate change strategy in 2004, while the Association started to implement such a strategy in 2012.

Normative pressures such as international standards to satisfy consumer requirements became an influencing factor for the adoption of environmental strategies. For example, one respondent expressed the following sentiment:

... “The demand for special Colombian products requires modifying the production standards of farmers. The Association promotes the development of special product programs including sustainable certified products ... that make use of international standards for social, economic and environmental requirements” ...

International market requirements from the US, Japan and European countries instituted the mechanisms for the adoption of environmental standards and certifications. In Japan, for example, there is high demand for special agricultural products and, for example, the Japanese consumer is willing to pay high prices for better quality products such as organic, eco-friendly and fair trade products. Japan constitutes a key buyer and the Association represents the second most important supplier of this agricultural product in Japan (Roldán, 2011).

The regulation to these agricultural activities in Colombia has mainly focused on the control of foreign trade, quality of products and taxes but not specifically concerning environmental issues. Nevertheless, any industrial activity in Colombia must comply with water use, air emissions and the management of residues. From interviews and sustainability reports, there is evidence of a general legal framework in which the environmental management of any industrial activity must be kept in compliance with water use, air emissions and residual management.

No evidence was found of community pressure for the adoption of environmental strategies. Currently, the surrounding communities of the agricultural farms benefit from the projects developed by the Association for its associates, who also belong to the influenced communities.

Table 26 Business Context – Agri-business.

ESA FACTOR	CATEGORIES	MAIN FEATURES
	Coercive	General legal framework for water use, air emissions and residual management. Neither environmental license nor hearing process requests apply to this industrial sector.

ESA FACTOR	CATEGORIES	MAIN FEATURES
BUSINESS CONTEXT	Mimetic	Main competitor's practices associated to climate change adaptation and best practices.
	Normative	Industry standards such as ISO 14001, Rainforest Alliance, UTZ and 4C certification among other sustainability protocols.

b) Business model

Agri-business runs a *dynamic business model* focused on the improvement of the productive chain, in order to generate revenues for its associates, reduce environmental impacts by the use of cleaner technologies, adopt best productive agricultural practices and strengthen the social tissue of farmer communities.

The business model is deployed through the financial, technological, organizational and strategic capabilities of the firm.

The financial capabilities constituted a mechanism to perform R&D investments for the development of organic products, in order to access new and mature markets and develop technological solutions to support sustainable practices.

The Association has used its financial capabilities to produce certified organic products to get access to mature markets. Certified organic products imply that the “product has been produced and processed in an ecologically sound manner” (FAO, 2018).

Besides, R&D investments have been focused in the development of technological solutions for water consumption reduction and the use of enzymes in the fermentation process to avoid the leaching of wastewater (Agricultural-Research-Center, 2016).

Strategic capabilities have constituted a mechanism for brand positioning by offering an organic agricultural product, incorporating social projects with marketing activities and establishing a constructive dialogue with stakeholders. Strategic capabilities have supported the Association in representing more than 500.000 farmers and achieve an important level of acceptance and remembrance among consumers and the agricultural product industry.

Additionally, strategic capabilities have been present in the Association in order to obtain resources from government cooperation funds (in addition to revenues from their own sales), resources from royalties for the use of its brand and resources from the contributions of the associates. Finally, by using this capability, the associates have gotten access to rural electrification, waterways, and the improvement of local roads (Farmers-the Association, 2017).

Besides, regarding the environmental strategy focus (i.e. green products) and the relation with its business model, the Association has stated:

“... Since 2009, the Association established a line of action towards sustainable agriculture to promote a good living among farmers, and to make a long-term profitable

activity from the agricultural business, that contributes to economic and social development, while protecting natural resources ... “(Proclama, 2021)

Along with this statement, Association has adopted, since its foundation high quality product standards to create a brand differentiation in the international market. For example, the Protected Designation of Origin (PDO) in the European Union and Switzerland has recognized the quality of the agricultural product in relation to its origin since 2005 and 2013, respectively (El Tiempo Newspaper, 2017). Denomination of Origin is understood as “being the name of a region, which is used to designate an agricultural product that has qualities or characteristics that obey fundamentally or exclusively to the geographical medium with its natural and human factors, the production, transformation and manufacture being carried out in the geographical area in question” (European Commission, 2017).

Organizational capabilities included the managerial ability and organizational learning for dealing with changes and external demands and maintain the competitive advantage of the firm. For example, in the 70’s the Association used to manage the commercialization of their products mainly through brokers and international distributors. Due to a low international commodity price, in the 90’s, the company decided to implement a new commercial strategy in order to add value at the end of its chain by processing in Colombia and perceiving higher returns for the farmers (Ramírez & Villegas, 2002). The company established a market and commercial format through own and franchised retail stores in more than 13 countries and more than 300 stores (Farmers-the Association, 2017).

Association has used its organizational learning capabilities as a mechanism to achieve pollution reduction. The main sources of organizational learning have been related to R&D activities, farmers’ involvement and the adoption of best agricultural practices.

Association encourages farmers to adopt and implement improvements in environmental conservation and water and energy management, relying on best practices based on the experience and knowledge from their Agricultural Research Center (Farfán, 2011).

Additional practices include the transformation of productive systems to make them resilient to climate change through shadow management for crops, reforestation and protection of soil and water systems (Agricultural the Association, 2017).

Additional capabilities have included the faculty of leveraging the business through technical know-how and R&D on new products and sustainable practices. Technical know-how have also supported sustainable practices including a dry depulping process, through mechanical removal techniques, to reduce water consumption and the amount of wastewater disposal (Agricultural-Research-Center, 2016).

Environmental practices supported by technological capabilities have been related with the implementation of efficient and environmentally friendly processes for the development of organic products, including sustainable characteristics in farms such as water saving, diminishment of water waste, reduction of pollution and the use of residues (Agricultural the Association, 2017).

Table 27 Business Model – Agri-business.

ESA FACTOR	CATEGORY	MAIN FEATURES
BUSINESS MODEL	Dynamic	*R&D investments for the development of organic products. *Use of technological capabilities to support sustainable agricultural practices.
		* Brand positioning by offering an organic agricultural product and by incorporating social projects with marketing activities * Management of relations with stakeholders and communities to position Association as socially focused.

c) Manager's perspective

The manager is Colombian and started to work in the company in 1991, when he was 30 years old, occupying the following positions: Logistics Operator Manager, Administrative and Financial Manager, Manager of Distribution Stores and General Manager. His work experience during more than 20 years in the Company has focused on logistics, planning and control and management (La Silla Vacía, 2016).

Under his position, 2.800 million trees were renovated (El Tiempo Newspaper, 2014), 120.000 farmers were certified as organic product farmers and 320.000 ha of climate resilient crops were bred.

Main features observed in the manager's perspective were associated with the manager's personal values, in conjunction with his favorable attitude towards economic responsibilities and a transactional leadership style.

- Personal values

The CEO exhibits independent thought and action to improve the welfare of associates. For example, the CEO states, in relation to his personal values:

“It is necessary to face the coming challenges with conviction, in an independent, organized and deliberative manner”.

Different behaviors of the CEO in the past have shown he is an autonomous person that is able to choose and maintain his own decisions. For example, the Colombian government issued a set of recommendations for the management of this agricultural product in Colombia in terms of eliminating subsidies, eliminating the intervention of the Association in agricultural policy and separating export activities from productive

activities (Amat, 2015). But the Manager was against the policies proposed by the governmental commission for the management of this agricultural product. He stated: “the erroneous assessment of the report, coincides with the clamor of some multinational corporations that try to remove the Association, which impedes them to place the price they want for the agricultural harvest, causing harm to smallholders, as they do in the rest of the countries of America, where there is no State in the market” (Dorado, 2015). The commissioner recognized that the government was not able to implement its policy because of the manager’s position about the recommendation of the government (Amat, 2015).

In acknowledging his concern about independent thought and action, the CEO exhibits self-direction as his main personal value. He preferred to quit his job before accepting the recommendation of the government in the sense of introducing deep changes in the Association and putting in risk the welfare of the associates. Autonomous modes of behavior became expressions of the CEO’s need for freedom to choose his own goals in the benefit of the associates. The CEO’s self-direction supported the implementation of projects for the welfare and prosperity of the associates.

- Perspective towards ESA.

The CEO mentions that it is possible to:

... "Guide, organize, promote and regulate the Colombian agricultural industry, seeking the welfare of farmers (associates) through the following mechanisms: collaboration, participation and promotion of the economic, scientific, technological, industrial and commercial characteristics of the industry” ...

CEO also states: “This perspective is what has allowed farmers to achieve consensus and unity. He ends up saying: “We must rethink our strategy and redefine, re-orientate, adjust and improve everything that is necessary to assure the welfare of the farmers and the regions where they are located” (Manager statement, 2013).

The former statement suggests that the CEO’s perspective on ESA focuses on profits through the creation of economic value for shareholder (farmers) satisfaction. In the CEO’s attitude toward profits, his responsibility relates to the creation of value for farmers while at the same time implementing environmental practices associated to good business practices such as increase in productivity and growth of organic products. Besides, the CEO’s perspective toward profits supported environmental practices associated to resource management and cleaner production to intensify process optimization through the adoption of environmentally friendly technologies.

CEO also has mentioned that the environmental perspective for the strategic plan 2015 - 2020 is focused in risk management by using technology and deploying plans for biodiversity conservation in order to adapt to the effects of climate change. He also adds that is necessary to adjust environmental regulations to be able to manage environmental resources (Agricultural Association, 2014).

- Leadership style

CEO's leadership style corresponds to a transactional one, in the sense of improving the economic conditions of the farmers by giving them access to a better income. Besides, a transactional leadership involves reciprocity among people that might respond in similar ways to each other. For example, regarding reciprocity, the CEO manifests:

... "An extensive process of **consultation** with the associates has been carried out through the Municipal and Departmental Committees of Farmers, who in a **participatory** manner **expressed** their problems and their challenges for the future. By this reason, the Strategic Plan is based precisely on the four pillars of sustainable development: economic, social, environmental and institutional, which is coherent and consistent with the development and welfare of the farmer population" ...

CEO implemented a consultation process with the associates in order to develop the Association's strategic plan. This process allowed an exchange of ideas for the construction of the strategy. By leading a reciprocal process, his leadership style fits the transactional one. The CEO mentioned:

... "The guidelines and strategies adopted in the Plan require institutional adjustments to achieve the goals we have agreed upon" ...

From the following quotes, it is clear that there is a form of leadership focused on clear goals and desired outcomes in relation to environmental issues, which correspond to:

... "We are focusing on climate risk management... the product is being prepared technologically to face the changing climate, by adapting our production systems" ...

... "In relation to environmental mitigation, special emphasis is put on biodiversity conservation, in conjunction with waste management, environmental education and protection of wetlands, among other issues" ... "in terms of resource management, it is necessary to intensify process optimization through the adoption of environmentally friendly technologies such as cleaner technologies"

The CEO's leadership style supported climate risk management strategies, including resilient crops and biodiversity conservation programs for stabilization of soils and basins. Climate risk management has focused on preparing the product and adapting the production systems to face the changing climate. The CEO mentioned as one of his achievements the support of the practices towards climate risk management:

... "Despite the inclement weather that brought our production to a minimum of 7.8 million bags, we managed to recover it to historical levels of 12.5 million bags of green coffee and with an increasing trend, a result that finds its explanation in the renovation of 3,358 million trees" ... (the CEO, 2015)

Table 28 Manager's Perspective – Agri-business

ESA FACTOR	CATEGORIES	MAIN FEATURES
<p>MANAGER'S PERSPECTIVE</p>	<p>Profits perspective towards ESA and a Transactional leadership style</p>	<p>*Creation of economic value for shareholders</p> <hr/> <p>*Risk management through the adoption of sustainable practices for climate change adaptation. *Alliance building with government to develop health and educative solutions in rural areas influenced by the company *Development of a capability building program for young farmers, to motivate the them to remain in business and not to abandon rurality.</p>

- *Environmental strategy adoption in the Agri-business.*

Agri-business under the influence of green market demands and competitors adopted an environmental strategy focused in *green products and green processes* supported by a dynamic business model and a manager's profits perspective (See Figure 13). Main practices at Company corresponded to the certification of organic products, the adoption of industry standards and sustainable agricultural practices in addition to their engagement in environmental conservation initiatives and the implementation of climate change adaptation strategies.

Association adopted a green products strategy for product differentiation and take advantage of market opportunities supported by the management of relations with authorities and the improvement of its brand reputation.



Figure 13 ESA and the ESA factors at the Agri-business association.

The main features of the business context corresponded to market requirements from international and mature markets, competitors' best practices and climate change conditions. A dynamic business strategy focused on the improvement of the productive chain, in order to generate income for the associates, reduce environmental impacts by the use of cleaner technologies and best productive practices, and strengthen the social tissue in farmer communities. Finally, the main capabilities are related to technical know-how, organizational learning and innovation. Such capabilities have supported the Association's focus on the improvement of agricultural practices, organic product development and transfer of economic benefits to farmers.

The Association has adopted its environmental strategy as an opportunity to improve its image and assure business continuity through sustainable agricultural practices, brand management and the administration of relations with stakeholders. Reputational strategy has been implemented in conjunction with biodiversity conservation programs and the implementation of smart crops for climate change adaptation.

Finally, regarding the manager's perspective, the main features have been associated with the CEO's self-direction values, his profits perspective on CSR and transactional leadership style. The CEO supported productivity enhancement and the development of organic products. He sought to improve the welfare of the associates by developing alliances to access resources from cooperation governmental agencies and other cooperation funds to support business operation and brand management around the world, achieving an important level of acceptance and remembrance in the Colombian and international market.

4.6. Cosmetic company

Cosmetic company is a direct sales *Multilatina* corporation focused on cosmetics and personal care products with more than 50 years of experience in the design, production and distribution of products for feminine beauty. This multinational group operates in more than 14 countries of the Americas. In 2018, Cosmetic Company reported revenue s for 1,16 billion USD (DSN, 2019). Cosmetic Company is the leader of the market in Colombia and the third one in Latin America, maintaining more than 9,1% of the beauty market. Additionally, the number of employees of the Company sums up 7.500 people, in addition to the 800.000 people from direct sales that support the operation in the Americas. In Colombia, the cosmetic industry constitutes a dynamic sector, with estimated total sales above 4,17 billion⁸ USD by 2020. Due to the economic dynamism of the cosmetic sector, Colombia has become the “fifth largest beauty and personal care market in Latin America” after Brasil, Mexico, Argentina and Chile” (Portafolio, 2018)

- Observed environmental practices

The environmental practices observed at the Cosmetic Company were related with *green products design* (i.e. use of natural ingredients) and *green processes* strategies (i.e. energy efficiency programs and low-resource-demanding technologies), environmental communication campaigns and the adoption of industry standards in addition to their engagement in environmental conservation initiatives and support of pollution prevention programs and socially based investment.

Green products design included the development of environmentally friendly products through the use of more natural ingredients in conjunction with the development of cruelty-free products. For example, the company is working on the selection of natural ingredients such as moringa and marine algae, among others⁹ (Cosmetic Company, 2018) to renovate its product catalogue. This process has already been going on for several years. Finally, in relation to the development of cruelty-free products, the company uses alternative methods for products testing in lab conditions, in order to evaluate their different formulas and guarantee a product without animal testing (Cosmetic Company, 2018).

Green processes strategies included the implementation of eco-efficiency programs (i.e. resource efficiency and the transformation of waste into value) and optimization of operations through the adoption of best practices and the acquisition of low-resource-demanding technologies. Specifically, the company has recorded improvements in pollution prevention practices. For example, Water consumption reduction has occurred consecutively in the last four years and above 39% since 2013. In relation to the management of residues, the amount of ordinary waste has been reduced by 47% between 2013 and 2017 (Cosmetic-Company, 2018). Finally, the company has made an effort to

⁸ Anglo-Saxon billion= 1*10⁹

⁹ Public information available at corporate web page

develop a green culture through personnel training, the use of environmental indicators for process monitoring and environmental reporting for business benchmarking (Interviewee, 2018).

Cosmetic Company has also performed environmental communication campaigns through green reports, web page communications and participation in industry forums to keep the general public informed about their environmental advances. Their green reports, which have been published since 2010, incorporate indicators about resource consumption, residual management, environmental awards and social projects. Additionally, Cosmetic Company has led an environmental network in Colombia to set environmental initiatives for the sector and promote best practices through such collaboration network. Furthermore, in the last three years, the company has identified additional face-to-face channels towards customers, direct sale consultants and general public in order to communicate the company's contribution to society. About this face-to-face practice, which has been operative for a few years, during a public interview, the sustainability manager pointed out how the cosmetic industry is beginning to recognize the company as a sustainable firm because of its level of ESA adoption.

... "Representatives of companies from different sectors are beginning to recognize the company as a leader in the adoption of environmental strategies" ... "We are beginning to generate a greater presence in specific socialization spaces to communicate our best practices" ... (Marin-Moran, 2020).

With regard to the adoption of industry standards, the company has implemented different practices such as the adoption of ISO 14001, printing of catalogues in environmentally sound paper (PEFC¹⁰ certified), construction of green offices (LEED certified) and the subscription of the Company to UN Global Compact principles. Furthermore, Cosmetic Company has participated and received various environmental awards such as RACES¹¹, which is granted by the local environmental authority, due to its level of adoption of best sustainable practices.

¹⁰ The Program for the Endorsement of Forest Certification provides reassurance to companies involved in the purchasing of wood and paper products committed to the sustainable management of forests.

¹¹ The goal of the Environmental Recognition to Sustainable Companies is to reward those companies that perform environmental responsibility beyond norm compliance.

Table 29 ESA – Cosmetic Company.

OBSERVED ENVIRONMENTAL PRACTICES
* Adoption of green product design practices associated with the use of natural ingredients and development of cruelty-free products.
*Adoption of green processes practices associated with process monitoring, waste management and improvement of operations to achieve efficiency in resource management and the implementation of energy efficiency programs.
* Socially based Investments for developing the company’s projects, in order to achieve win-win deals.
* Support for culture-based educational programs, co-financing of infrastructure and public utilities, financing of social entrepreneurship and support for rural development projects.
* Adoption of industry standards and voluntary initiatives such as ISO 14001, Global Compact and printing of catalogues in environmentally sound paper (PEFC ¹² certified).
*Support for environmental conservation programs focused on reforestation plans.

- ESA Factors.

a) Business context:

Cosmetic Company is influenced by a mimetic pressure exerted by a competing family business from the same sector in the Latin-American market. These two firms actually dispute the second and third places in Latin-America. Competition began at the end of the 60’s, when the president of Cosmetic Company used to run a family cosmetic business with his brother. However, in the 80’s the two brothers decided to split and nowadays each of them runs his own company. The main competitor has deployed similar practices not only regarding sustainability (i.e. natural ingredients, cruelty -free products) but at the strategic focus (i.e. direct sales and women empowerment (Cosmetic Company, 2018b; UEFT, 2019).

Cosmetic Company is also exposed to normative sources from [international] successful competitors. For example, because of the dynamism of the sector, “the cosmetic industry is always selecting safe ingredients and developing safer products for humans and the environment, renovating every year one quarter of all the cosmetic products on the market” (Cosmetics Europe, 2019). The industry exerts pressure on cosmetic companies not only because of the highly competitive market, but also because of the need to preserve the image of the sector as an ethical and environmentally responsible industry. Green product development, at industry, has focused on the use of natural ingredients to deliver safety and quality products in alliance with greener suppliers (Berhad, 2013)

¹² The Program for the Endorsement of Forest Certification provides reassurance to companies involved in the purchasing of wood and paper products committed to the sustainable management of forests.

The following statement confirms the existence of a normative source from a market trend:

...“ The three brands have included more natural products, with more natural ingredients. This is definitely a market trend around the world, but there is also another aspect that is parallel to that: people want to look good and feel good. Nowadays, there is much more awareness about people’s wellness, which drives the beauty market”...(Vera, 2019).

Finally, in relation to coercive pressures, neither environmental license for natural resource extraction or hearing processes apply to this industry sector. Additionally, the gathered information does not register any influence from communities located nearby the company’s facilities.

Table 30 presents a summary of influencing sub-factors and environmental practices in the Business Context.

Table 30 Business Context – Cosmetic Company.

FACTOR	CATEGORY	MAIN FEATURES
BUSINESS CONTEXT	Coercive	Neither environmental license for natural resource extraction or hearing processes apply to this industry sector
	Green market	Green market demand (i.e. customers and public concern) for the use of natural ingredients and cruelty-free products.
	Green industry	Subscription to Industry standards such as ISO 14001, printing of catalogues in environmentally sound paper (PEFC ¹³ certified) and Global Compact.

b) Business model

The company runs a *dynamic business model* supported by financial capabilities, R&D and operational efficiency. Cosmetic Company is on an upward trajectory expecting to grow at an annual rate of 10% (Notigrafix, 2018).

Financial capabilities constitute a mechanism to perform investments for the development of an efficient production. For example, the company has made an investment of 2 million USD in its manufacturing plant to improve operations through low-resource-demanding technologies and achieve higher efficiencies in the development of innovative and

¹³ The Program for the Endorsement of Forest Certification provides reassurance to companies involved in the purchasing of wood and paper products committed to the sustainable management of forests.

creative fragrances (La República, 2018). Additionally, the company has implemented an innovation unit in order to test more than 500 different new formulas per year (Revista Dinero, 2019). Furthermore, more than 25% of the new sales every year originate from new products (Cosmetic Company, 2017).

Operational efficiency has allowed the Company to achieve an economically and environmentally sustainable business. For example, since 2013, they have saved more than 50.000 m³ of water and between 2016 and 2017, more than 1200 MJ in energy consumption (Cosmetic Company, 2017).

Table 31 presents a summary of the environmental practices observed in the Business model dimension.

Table 31 Business model – Cosmetic Company

ESA FACTOR	CATEGORY	MAIN FEATURES
Business Model	Dynamic	<p>* R&D capabilities for the development of 500 different new formulas per year.</p> <p>*Operational efficiency through the optimization of operations and low-resource-demanding technologies in order to achieve an economically and environmentally sustainable business.</p>

c) Manager`s perspective

The founder holds a Bachelor of Science in Business from a North American university and, together with his brother, inherited a family business focused on cosmetics. The founder began to work in the company as a sales manager in the late 60`s. He was the head of the Company in 1970 and in 1985 he launched a brand in Colombia, which would become a *Multilatina* Cosmetic Company

In 2018, at the closing of this thesis, the founder delivered his position to a new president, who is woman¹⁴ and was the former Commercial Vice President of the Company. The founder still remains in the presidency of the Board.

Influencing factors present in the manager`s perspective were associated to the CEO`s personal values in conjunction with his favorable attitude toward profits and a transactional leadership style.

¹⁴ Emphasis is added because this company operates a direct sales business through a women`s network and mainly focused in customers that are mainly women.

- Personal values

In relation to personal values, the CEO exhibits self-directed openness to change (e.g. independent thought) and stimulation (e.g. novelty to overcome challenges):

...“At the end I chose to leave and open regional markets. My brother stayed in front of the company and when I returned we had different points of view about the future of the Company”...(Gamarra, 2013)

The founder has built a company that runs on a business model (i.e. direct sales through consultants) which allows women to earn an income for being distributors of the Company's products. According to the founder, such economic option gives women the flexibility to plan their work schedule and take care of their family responsibilities (Niethammer, 2012).

Besides, the founder started his own business hand in hand with a program for women (i.e. sales consultants) to strengthen their leadership and entrepreneurship capabilities and improve the firm's performance: “Investing in women and making them the company's most valuable **asset** enhances competitiveness, changes the way of doing business and changes lives” mentions the Social Innovation Director of the Company (Niethammer, 2012).

Finally, in establishing a novel business model during the 60's to offer Latin American women an economic independence opportunity to achieve a key role in society, the CEO exhibits novelty to overcome society challenges as one of his main personal values. To point out the reflection about novelty, in the 60's only 2 adult women out of 10 used to work in Latin-America and nowadays at least 6 out of 10 women are having a key role in the labor market (CISCO, 2018).

- Perspective towards ESA

The CEO's perspective towards ESA is focused on profits in order to achieve economic benefits while fulfilling the basic rules of society. The founder has mentioned that he is fully supportive of some of the initiatives related to the beauty market, specifying that he has been fully aware of activities related to women care and empowerment.

...” From the beginning of the company 45 years ago we have been motivated by a purpose: to propel beauty and personal fulfillment... We are helping more than one million women the opportunity to improve their lives ... achieve personal goals, contribute to their homes and help their communities as well...(Gomes, 2013).

In highlighting the key role of direct sales consultants in the success of his business, the founder exhibits his expectation about maintaining the business model that allows the company to thrive on a distribution network of women consultants¹⁵.

Additionally, Public statements, reports and interviews exhibit his attitude towards CSR:

...“ Assuming the power to make our dreams come true means recognizing that our actions and decisions have an effect on our environment, and it is up to us to have a positive effect on it ”...(Cosmetic Company, 2018b).

The founder confirms his will to fulfill the basic rules of the environment:

...“Working for the social, environmental and economic dimensions of the sustainability of Latin America is a way to give life to our main purpose of promoting beauty ”... (Cosmetic Company, 2018b)

During the corresponding interview, an environmental officer also mentioned that the support of the founder to environmental practices constituted a key leverage to articulate the purpose of “promoting beauty”, with the implementation of environmental strategies by “establishing a policy to become responsible actors in the consumption of resources, using chemical substances in a responsible manner and protecting the environment for future generations.

- Transactional constructive leadership style

The leadership style of the founder corresponds to a transactional constructive one, focused on clear goals and desired outcomes while providing feedback and praise to employees according to the fulfillment of performance measures. The founder has consistently established the importance of positioning the company in the Latin-American market around their main purpose: “*We promote beauty to achieve personal fulfillment*”. Since 1985, the founder has guided Cosmetic Company according to the aforementioned purpose, which has supported them in the achievement of a remarkable development and growth, shifting from 50 consultants and a single brand in Colombia, to three flagship brands throughout Latin America with more than 800,000 consultants (Cosmetic Company, 2018a).

Undoubtedly, his collaborators have helped him build this great business, which he recognizes in most of his dialogues: “Our achievements would not be possible without the commitment of our collaborators, the trust of our consultants, the loyalty of our consumers, the support of our suppliers and the way we care for the environment”

¹⁵ “Direct sales is a business model where independent contractors (i.e. consultants in the Cosmetic Company case) sell the company’s products directly to consumers. There is no fixed retail location and direct sellers often work out of their homes” .

Table 32 presents a summary of the environmental practices observed in the Manager's perspective dimension.

Table 32 Manager's perspective – Cosmetic Company

ESA FACTOR	CATEGORIES	MAIN FEATURES
<p>MANAGER'S PERSPECTIVE</p>	<p>Profits' perspective and a transactional leadership style</p>	<p>*Support for the use of natural ingredients in products to achieve competitive advantage. *Support for energy efficiency and waste management programs to gain efficiencies.</p>
		<p>*Socially based investments for developing the company's projects, in order to achieve win-win deals.</p>

- *Environmental Strategy Adoption - Cosmetic Company.*

Cosmetic Company under the influence of green market demands and competitors adopted an environmental strategy focused in *green products* and *green processes*, supported by a dynamic business model and a manager's profits perspective (See Figure 14). Main practices at Company corresponded to the use of natural ingredients, the adoption of energy efficiency programs and low-resource-demanding technologies, in conjunction with environmental communication campaigns and their engagement in environmental conservation initiatives and socially based investments.

A *dynamic business model* was observed at Cosmetic Company when it increased their portion of the market through efficient and innovative ways of conducting business and product innovation. Specifically, they have developed green innovative products with more natural ingredients and green processes practices such as cleaner production.

The firm has performed R&D investments through own research centers, in order to develop new products for market adaptation and lower their environmental footprint. The firm has the capability of establishing and managing long and reliable relationships with stakeholders (e.g.: consultants, academia and stakeholders), which has allowed it to be one of the leaders of the market. Finally, the operational efficiency capabilities of the firm have allowed it to undergo continuous improvement through eco-efficiency practices.

Finally, the manager's perspective towards a profits supported the development of greener products and the implementation of eco-efficiency programs to develop the purpose of the company, in order to achieve a win-win deal and accomplish the goals of the company. Likewise, the CEO has supported program for women (i.e. sales consultants) to strengthen their leadership and entrepreneurship capabilities and improve the firm's performance, which is a consultant-based and prosperous business.



Figure 14 ESA and the ESA factors at the Cosmetic Company.

4.7. Dairy Company

Dairy company is a food and milky drink Colombian company that was established in the middle of the twentieth century. The portfolio of Dairy Company has evolved from milky drink products to healthy and sustainably manufactured products. Dairy Company has reported a net income over 300 million USD and, by the year 2019, they issued preferential shares for private investors in order to leverage their growth and expand operations (Periódico Portafolio, 2019).

- Observed environmental practices

The environmental strategies of the Dairy Company were associated with *green products* design (i.e. sustainable packaging) in addition to green processes (i.e. operational efficiency) strategies and their commitment to *social innovation* projects focused on building capacities in supply chains and the adoption of voluntary standards.

In relation to the environmental strategies of the firm, an interviewee has mentioned that “practices originate from the analysis of materials and the environmental impact assessment of the value chain, which are mainly associated to:

- * Development of Carbon neutral products
- * Greening of processes through the use eco-indicators and the establishment of plans to improve the company’s performance, such as reduction in water consumption for the laundry operations of the company's equipment.
- * Responsible packaging through the reduction of layer thickness, which has allowed them to save the equivalent of 187 tons of plastic bags per year.
- * Sustainable livestock through the promotion of zero deforestation on the part of their milk suppliers ...”

Dairy Company has developed *green products* by performing actions to diminish the environmental impact of their products. Specifically, they have received certifications for three of their products as carbon neutral, which is a global initiative, intended to offset CO2 emissions and promote climate change compensation activities. In relation to sustainable packaging, in 2019 the company reduced 10% of the plastic they use for long-life product packaging. This is equivalent to the reduction of 180 tons of plastic and 480 tons of CO2 per year, thus lessening the Carbon Footprint.

Dairy Company has also implemented greener processes like eco-efficient solutions, including the improvement of both operational efficiency and water and energy consumption at production plants. The company measures its operational environmental impacts and establishes specific actions (i.e. process improvement and automation) for the reduction of water and energy consumption. As a consequence, the company has saved more than 2700 million liters in the last 10 years (Dairy - Company, 2019)

Social innovation projects have been focused on building capacities in supply chains associated to strengthen the productivity of farmers in order to ensure better social conditions and boost the supply of raw milk for the consolidation of dairy basins that guarantee competitiveness in quantity, cost and quality. The building of capacities also includes the greening of cattle ranching which, in turn, allows carrying out a set of actions intended to avoid the deforestation of natural woodlands and impede the transformation of moors. This is being done through education programs directed to farmers in order maintain the conditions of the agro-ecosystems of the different regions of the country where the company buys milk.

Additionally, the firm was the first dairy company to subscribe an agreement with the Colombian Ministry of Environment, in order to subscribe a zero deforestation commitment in its cattle zones (Dairy - Company, 2019a). Finally, Company has been committed to social projects for the improvement of the quality of public education and the development of nutrition programs in rural areas influenced by the company.

In relation to environmental standards, Dairy Company has incorporated industry standards such as ISO 14001 in two of their production plants, while advancing in the extension of the certification to all their production plants (Dairy - Company, 2019b).

The current survey didn't observe any environmental practices associated to obtaining social license from communities. Just as well, no specific community hearing processes applicable to dairy activities were detected. The company mitigates environmental impact associated to its manufacturing processes via product development, sustainable packaging, greening of the supply chain and technological innovation.

Table 33 ESA –Dairy Company.

OBSERVED ENVIRONMENTAL PRACTICES
* Dairy Company has developed green products by performing actions to diminish the environmental impact of their products through light packaging and carbon neutral products.
*Adoption of green processes practices were associated to process monitoring, improvement of operations to achieve efficiency in resource management and the implementation of water and energy efficiency programs at production plants.
* building capacities in supply chains associated to strengthen the productivity of farmers in order to ensure better social conditions in the region and boost the supply chain of raw milk
* Support for the improvement of the quality of public education and the development of nutrition programs in rural areas influenced by the Company.
* Adoption of industry standards and voluntary programs such as ISO 14001 and Portafolio Verde.

- ESA Factors.

a) Business context

Normative pressures such as green industry and green markets are the main influencing sub-factors in the business context. In opposition, community pressures do not constitute the main influence on the adoption of proactive environmental strategies by this company.

Normative pressures corresponded to industry standards from green industry, sustainable packaging from competitors and green requirements from credit providers. The dairy sector is a very dynamic industry that promotes environmental performance improvement. For example, the main competitor anticipated the reduction of the packaging layer (to use less plastic) just by a few months. Conversely, the competitor got behind Dairy Company in the development of carbon neutral products (Competitor of Dairy-Company, 2019). Mechanisms for the adoption of ISO 14001 and the greening of the supply chain correspond to the fulfillment of IFC requirements when granting a financial loan. IFC is a capitalization fund provider that has supported Dairy Company in two occasions: 2011 and 2018.

In relation to the adoption of ISO 14001 in the production plants, a public official report of the company also states that the greening of the supply chain is one of the most important requirements of IFC investments (IFC, 2017b)

Community demands have not constituted a key influencing factor for the adoption of environmental strategies. Specifically, hearing processes with ethnic or local communities have not taken place with the company. Nevertheless, their community projects were developed unilaterally and corresponded to supply chain development and philanthropic activities.

Table 34 Business Context - Dairy Company.

ESA FACTORS	CATEGORIES	MAIN FEATURES
BUSINESS CONTEXT	Green norms	Requirements from IFC for the greening of supply chain.
	Competitive sector	Adoption of sectorial practices in sustainable packaging.
	Coercive	No environmental permits or hearing processes apply to this industrial sector.

b) *Business model:*

The *dynamic business model* observed at Dairy Company was found to favor the adoption of efficient and innovative ways of conducting business, thus triggering processes and product innovation. Specifically, the development of green products has been supported by organizational capabilities as a mechanism to carry out innovation to achieve: 1) reputation positioning through the attention paid by the public to greener products and 2) competitive advantage by anticipating competitors in the development of new green markets such as carbon neutral products.

Business model has been supported by R&D investments and technical know-how. R&D has been present in the Dairy Company since its foundation in 1958, and it has increased over the years. The company started with the production of milky drinks in the country, then evolving towards healthy, sustainably produced dairy products. Dairy Company has developed its technical know-how by acquiring and developing complementary businesses (i.e. brands and manufacturing plants), constituting joint ventures with renowned and experienced allies (mainly French companies) and looking for financial leverage through international investors such as IFC (Revista Dinero, 2017). This type of alliances have allowed the company to manufacture value-added products (such as yogurt) and expand its dairy product operations to more than 21 towns of Colombia (Revista Semana, 2019). Successful international allies have also supported the company in the development of new products and organizational capabilities for continuous process improvement.

Table 35 presents a summary of business model and main features.

Table 35 Business model – Dairy Company

ESA FACTOR	CATEGORIES	MAIN FEATURES
BUSINESS MODEL	Dynamic	*R&D investments for the development of green products and use of lighter packaging
		* Use of technical know-how for the implementation of green processes and the greening of the supply chain.

c) Manager's perspective

The founder of Dairy Company is a Bachelor of Science from the French Lyceum of Bogotá holds a Bachelor of Arts in Anthropology and Sociology and earned a Master's degree in Public Administration in North America. The CEO is Colombian and inherited a medium size dairy company that changed into a big business.

The influencing sub-factors observed in the manager's perspective were associated to the individual characteristics of the CEO, which cover his personal values, attitude towards CSR and leadership style.

- Personal values

When asked about his personal values and actions intended for the welfare of others, the CEO exhibits altruism as his main personal value:

... "I consider myself as a dream coordinator because ... I think that the function of employees is to eliminate hierarchies and not to receive orders ... My function is to motivate in them the sense of belonging to the Company by giving them authority and encouraging them to make their own decisions ..." (Redacción-Cromos, 2009).

Employees confirm the statement of the CEO in a different timeline:

"[...] I am happy about the way they recognize the work and effort in the Company... Thank you" [...]"

"[...] I want to give thanks for considering us in decisions ... and for encouraging us to move forward and grow" [...]"

"[...] It is to be admired that Dairy Company recognizes the unique talent of each collaborator.

A very cool activity! [...]"(Dairy - Company, 2018).

Finally, the CEO expected that those values be shared among the employees of the company and seems that he achieved according to the aforementioned comments:

"[...]To build the vision of the Company consists in "creating and transmitting a future perspective that people can appropriate" (Redacción-Cromos, 2009) "[...].

- Perspective towards ESA

The CEO's perspective towards ESA is focused on citizenship responsibility. The CEO has fully supported some of the initiatives that are considered sympathetic of social and environmental needs. Specifically, he has been attentive to discretionary activities to contribute to social purposes, associated to community education investments:

... “We must be socially responsible ... being aware that sustainability is the guide of our decision making, of the way we interact with all our stakeholders [...] and [sustainability] has become the driver that promotes our commitment with environmentally responsible actions, which will allow us to achieve a livable environment and the socio-economic conditions that contribute to equity” ...

Besides, CEO has fully supported social initiatives such as education and nutrition, in addition to the environmental ones that have been previously exposed:

With regards to education, the CEO supported the improvement of public education in nearby towns to the facilities of the Company through the development of a Comprehensive Model for the Improvement of School Management that has contributed to enhancing the quality of teaching and learning, as well as the school and community management of public schools, “as a contribution to their determined effort to wake up in students a deep affection for knowledge, providing teachers with strategies and experiences that allow them to transform their pedagogical practices, thus ensuring high-quality public schools” (Reyes-Martinez, 2019).

- Transformational leadership style

The leadership style of the CEO corresponds to a transformational one, in which relationships are organized around a collective purpose, involving charisma and the stimulation of subordinates’ ideas and values. His leadership style has inspired employees around the development of dairy livestock farmers and their families and the solution of the country’s social needs.

... “We have transformed the company because we have the firm intention to reduce our ecological footprint along the value chain; contribute to the conservation of natural resources by producing more while using less resources and maintaining quality; reduce water and energy consumption; lessen waste sent to the landfill; and promote environmental conservation and non-deforestation practices” ... (Dairy - Company, 2019a)

To give a few examples, Dairy Company founded a program for the regions that have been affected by violence, in order to motivate and build abilities in young farmers, so that they are able to remain in the rural areas and perform better practices to develop high quality products in a sustainable way. This program has benefited more than 13.000 small dairy farmers that produce around 50 liters of milk per day. Additionally, a foundation of the company has implemented social programs focused on the improvement of nutrition levels in rural areas, including the donation of 1.5 million liters of milk per year.

Table 36 Manager’s Perspective - Dairy Company

ESA FACTOR	CATEGORIES	MAIN FEATURES
MANAGER’S PERSPECTIVE	Citizenship and a Transformational leadership style	*Support for the development of carbon neutral products and the adoption of green processes.
		*Committed for the improvement of public education quality. * Support for nutrition programs in rural areas influenced by the company

- *Environmental Strategy Adoption - Dairy Company*

Dairy Company under the influence of market demands, credit providers and competitors has adopted an environmental strategy focused in *green products and social innovation*, supported by a dynamic business model and a manager’s citizenship perspective. (See Figure 15).

Strategies observed in the dairy product manufacturing company included the reduction of packaging weight and of water and energy consumption, together with the development of carbon-neutral products in addition to green processes (i.e. operational efficiency), the greening of the supply chain, environmental conservation and support of social causes.

Environmental strategies were supported by organizational learning through R&D investments for product innovation. Organizational learning has allowed Dairy Company to face changing markets, adopt IFC green standards and develop and offer new and greener packaging. Green financing by IFC propelled the development not only of greener products but of a greener supply chain by building capabilities in young and future farmers.

As a consequence, Dairy Company contributes to the improvement of the environmental performance of suppliers, in order to reduce adverse environmental impacts along its supply chain.

Finally, and regarding the manager’s perspective, the CEO has supported the improvement of public education quality and the deployment of a nutrition program in the rural areas influenced by the company. Likewise, the CEO has supported organizational learning over time to offer carbon neutral products, green processes, and greening of the supply chains, all of which has resulted in innovative products and processes.

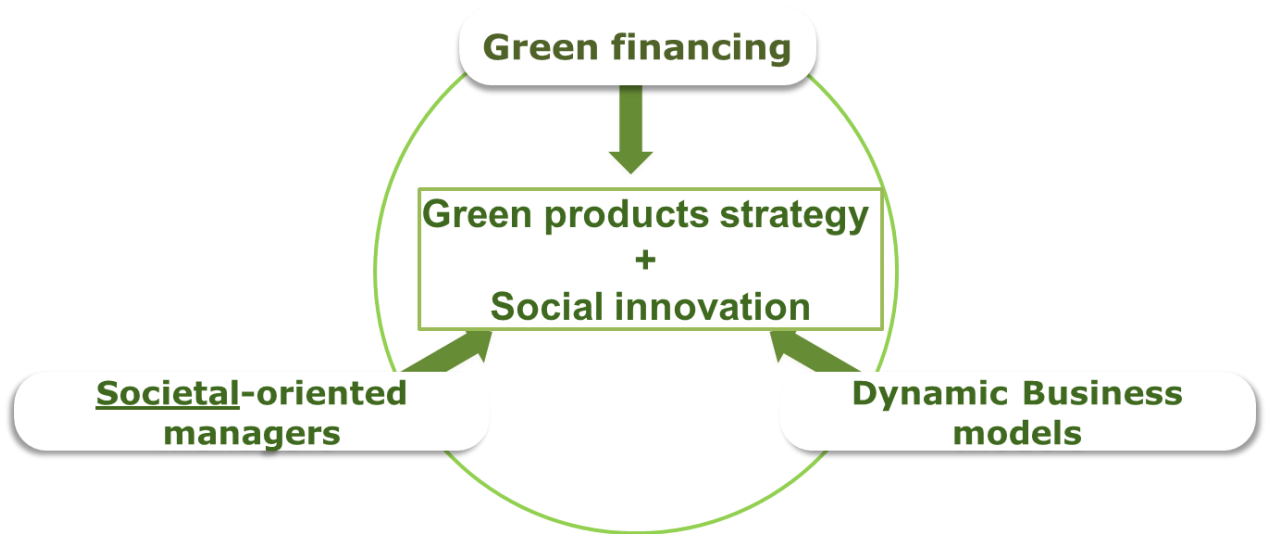


Figure 15 ESA and the ESA factors at the Dairy Company.

5. Analysis of results

This chapter analyzes the results of the present work, as framed in the fulfillment of its objectives: (i) the testing of the propositions about the *co-occurrence configuration between environmental strategies (i.e. green products and green processes) and specific types of business context (i.e. green markets or competitors), business model (i.e. dynamic or stable) and manager's perspective (i.e. societal or profit-oriented)*, in the studied cases (main objective); and (ii) the characterization of ESA and ESA factors in the studied Colombian big firms as they perform in an emergent economy (secondary objective). The contribution of the research is also presented in conjunction with future research avenues that could be fruitfully explored. Thus, section 5.1 addresses ESA in connection with the typology of environmental strategies presented in the literature review. Section 5.2 characterizes the ESA factors observed in the sample as framed in the literature. Section 5.3 assesses the co-occurrence between ESA and ESA factors according to the theoretical model developed by the author based on the literature review. This section constitutes the very core of the present analysis, since it actually tests the predictions derived from the hypothesis.

5.1. Environmental Strategies Adoption (ESA)

ESA in the studied large Colombian firms fits the environmental strategy typology presented in the literature review: compliance, greener processes and green products design. Novel environmental strategies related to green systems design were not observed in a systematic way, although some isolated practices such as waste exchange and the acquisition of some shared resources have been adopted by some of the cases under study. Results suggest that big firms in emergent economies probably adopt similar strategies to those adopted by firms in developed economies. Nevertheless, it was noticeable how all companies deployed corporate social programs (i.e. nutrition programs for children, co-financing of aqueducts and schools, promotion of sports and cultural activities in the areas of influence) in addition to environmental strategies, which are discussed in more detail in the section on analysis and discussion.

Environmental strategies mainly included green products design (focused on product innovation and the market), green processes (focused on savings and process improvement both at the company level and along the supply chain). Compliance oriented strategies featured environmental licensing and lobbying, pollution control, substitution of restricted materials, pollution compensation and management of the relation with stakeholders (focused on risk management). Green systems design strategies were not observed, thus allowing to speculate that Colombian large companies that were under study still are developing their capabilities to perform those type of strategies or could be assumed that the conditions required in the country to do so are not still in place. Table 37 shows the environmental strategies as they were observed in the studied companies.

While the green products design strategies constituted a brand differentiation means to achieve competitive advantage, the green processes strategy constituted a normative strategy driven either by company's envision to achieve a competitive advantage or by the pressure of parent companies and green competitors. The observed green products strategies were focused on the design and development of new solutions to supply or

create new markets while the green processes strategies were focused on cleaner production in order to achieve either a more legitimate or efficient operation.

Finally, the compliance strategies were intended for risk management and liability reduction focused on environmental and social license, which allows avoiding fines, community blockages and economic losses.

These observed environmental strategies confirm the typology employed for the present work. In addition, green products strategy tends to be aligned with green markets and dynamic business models while green processes strategy occurs under the influence of parent companies and organizational field contexts. Green processes then, seems to correspond to a disseminated strategy in large Colombian firms.

- **Green products strategy.**

Green products strategy in the studied Colombian companies focused on green marketing by selling novel products or services blended with environmental features. Examples of products corresponded to organic products (i.e. organic coffee) or green financial products (i.e. green bonds and green lending), both of which allow gaining competitive advantage by obtaining environmental and economic benefits, in addition to reputation improvement. In effect, the observed green products have allowed Colombian companies to enter new markets and improve their position. The specific practices observed in the studied cases included the development of agricultural organic products (Agri-business Association), development of carbon neutral products (Dairy Company), natural-based ingredients (Cosmetic Company), green bond placement (Bank) and financing of green projects (Bank).

- **Green processes strategy.**

Green processes strategy in the studied Colombian companies focused on improvement of operational efficiencies (i.e. cleaner production), which allows gaining competitive advantage by obtaining environmental benefits and cost reduction for first-mover companies, in addition to uncertainty avoidance for second-mover companies. In effect, while the observed green products have allowed companies to enter new markets and improve their position, operational-efficiencies have allowed Colombian companies to play safe and achieve the mentioned environmental benefits and cost savings. The specific practices observed in the studied cases included the development of cleaner production and operational efficiency practices (Bank, Chemical Company, Agri-business Association, Cosmetic Company and Dairy Company).

- **Compliance strategy.**

Compliance strategy in the studied Colombian companies was observed to focus on risk management of social issues (i.e. legal, environmental, reputational and economic risk). This strategy sought to achieve environmental and social license to operate in a safe manner by fencing off demands, reputation positioning and meeting of pollution standards.

The specific compliance oriented practices observed in the studied cases included environmental impact assessment, environmental management plans, renewal of environmental license, environmental litigation, ecosystem restoration and impact

mitigation, lobbying activities, hearing processes (applied by Utility Company and Oil & Gas Company), dialogue with communities, social projects, social investments and reward activities for communities (applied by Chemical Company, Utility Company and Oil & Gas Company).

Table 37 Main environmental strategies observed in the case studies.

Environmental Strategies	Main environmental practices	Cases
Green products	Development of organic products. Green bonds Use of natural-based ingredients Carbon neutral products and lighter packaging	Agri-business Association Bank Cosmetic Company Dairy Company
	Energy efficiency program Cleaner production Sustainable agricultural practices Upgrade residuals into value added products Greening of the supply chain Recirculation of water and operational efficiency	Bank Chemical Company, Agri-business Association, Cosmetic Company and Dairy Company Oil & Gas Company
	Green buys	Bank, Agri-business Association, Cosmetic Company and Dairy Company
Compliance	Environmental litigation and lobbying activities	Utility Company and Oil & Gas Company
	Ecosystem restoration required by law	Utility Company and Oil & Gas Company
	Substitution of toxic materials restricted by law	Utility Company and Oil & Gas Company
	Impact mitigation	Utility Company and Oil & Gas Company
	Reputation management	Chemical Company, Utility Company and Oil & Gas Company
	Hearing processes with communities	Utility Company and Oil & Gas Company
	Reward activities for communities	Chemical Company, Utility Company and Oil & Gas Company

5.2. ESA Factors

ESA factors observed in this research pretty well match those contemplated in the literature. However, some peculiarities of the socio-economic context need to be stressed, since they are specific of emergent economies.

Table 38 Main ESA factors observed in the case studies.

ESA FACTORS	Cases
Green markets	Bank, Agri-business Association and Cosmetic Company
Green industry (i.e. competitors, parent company, suppliers)	Bank, Agri-business Association, Cosmetic Company and Dairy Company
Dynamic business models	Bank, Chemical Company, Agri-business Association, Cosmetic Company and Dairy Company
Societally-oriented managers	Bank and Dairy Company
Profit-oriented managers	Chemical Company, Agri-business Association, Cosmetic Company
Environmental licensing for natural resources exploitation	Utility Company and Oil & Gas Company
Community and public demands	Chemical Company, Utility Company and Oil & Gas Company
Stable models	Utility Company and Oil & Gas Company
Compliance-oriented managers	Utility Company and Oil & Gas Company

- **Business context**

Business context factors corresponded to regulation (environmental licensing, pollution limits and environmental permits for environmental protection) and community pressure (demands for benefits in exchange for performing business activity), green markets (i.e. green standards, market requirements and consumer demands) and green industry (competitors, suppliers, parent companies).

- **Business models**

Business models factors corresponded to stable business models (supported by lobbying and litigation capabilities, technical know-how, business efficiencies, risk management and a permanent dialogue with stakeholders) and dynamic business models (supported by R&D and innovative capabilities and operational and supply chain efficiency).

- **Manager's perspective**

Manager's perspective toward ESA corresponded to compliance (i.e. fulfillment of environmental regulation), profits (i.e. addressing the needs of the market) and a societally-oriented focus (i.e. addressing societal needs in addition to shareholders' satisfaction).

- **Additional factors**

In addition to ESA factors, the socio-economic conditions of the country need to be mentioned. Twenty-seven percent of Colombian people live below the monetary poverty line, while the Gini Index is 0.53. Such conditions, coupled to scarce governmental presence over an extended period of time, could have affected the expectations of the communities about the role of companies in satisfying their needs at the local level, for which they certainly put pressure. The result of these factors is treated in detail in the discussion section.

It is key to mention that results were also related to the transfer of the local environmental capabilities of Chemical Company to the Multilatina company that purchased it. Specifically, the green processes approach of the Chemical Company constituted a key asset that was globally replicated by the Multilatina company. It seems that this corporation, in addition to the operational capabilities and market positioning of the local firm, also acquired its environmental capabilities, which had previously been recognized by the environmental authorities and the public as being proper of an environmentally sustainable company.

5.3. Co-occurrence configuration between ESA and ESA factors

The case studies showed the preponderant role of export green markets and international credit providers in the adoption of green products, thus driving the Colombian companies to build innovative capabilities hand in hand with a dynamic business model and a manager's perspective towards either a profits or a societal focus.

In turn, ESA towards green processes was influenced by voluntary programs for sustainability (e.g. developed by universities, regulators and industry) in addition to organizational industrial contexts made up of green competitors, key suppliers and associations in addition to parent companies or subsidiaries.

The cases that adopted compliance strategies relied on capabilities for environmental litigation and lobbying activities, ecosystem restoration, and impact mitigation (i.e., Utility Company and Oil & Gas Company), capabilities for maintaining an effective relationship with regulators and stakeholders, to manage business efficiency, implement technical know-how and management of reputation (Chemical Company, Utility Company, Oil & Gas Company). Utility Company and Oil & Gas Company dedicated to extract energy from natural resources. Specifically, Utility Company harnessed hydropower to obtain electricity, while Oil & Gas Company extracted hydrocarbons to refine them and obtain secondary fuels. In the cases that implemented a compliance strategy, it was observed a manager's compliance-orientation, in order to satisfy environmental advocates such as regulators, NGO's and communities.

Chemical Company was influenced by parent company, public concern about product toxicity and, the consequent health and safety risks of the company's products, and the influence of a highly regulated sector regarding worker protection. For their part, the *business model and manager's perspective* factors in Chemical Company were related to a dynamic business model and the profit focus of the manager of the company. The combined action of these factors may have driven the adoption of private (i.e. standards) and public regulated set of environmental strategies adopted by this company.

Finally, Oil & Gas Company was influenced by community pressure, NYSE, international competitors, the consequent environmental risks of the company's operations, and a highly regulated sector regarding environmental protection. For their part, the *business models and manager's perspectives* in Oil & Gas Company were related to a stable business model and the compliance focus of the manager and his transformational leadership style. The combined action of these factors may have driven the adoption of a compliance and green processes strategy.

These results suggest that the studied Colombian big firms may have developed their green products strategy under the influence of green markets at business context, dynamic business models and profits or societal manager's perspective. Study of Colombian cases refine the predictions made about the sample, in terms of a co-occurrence configuration between *green products design and green market contexts in conjunction with dynamic business models and profit-oriented managers*. In addition, it is interesting to note that companies that adopt *green products design* in conjunction with *social innovation*

strategies are influenced by *green market contexts*, *dynamic business models* and *societal-oriented managers*. The latter managerial orientation mainly focuses on social innovation, in addition to market and efficiency gains, while the former is directed towards the market and operational efficiency.

In turn, the adoption of a *green processes strategy* may have occurred under the following configuration: (i) *green processes strategy is triggered by a dynamic business model and a profit oriented manager in first-mover companies that want to achieve a competitive advantage and also* (ii) *green processes could be triggered by green industry and parent company contexts in second-mover companies that run stable business models with a compliance-oriented manager*.

Green processes occurred in 6 out of 7 cases, which allows contemplating the possibility that, for example, the adoption of a green processes strategy may occur because of the dissemination of such strategy in large firms of the Colombian business context. It can only be speculatively asserted that normative (i.e. voluntary programs) and mimetic influences (green competitors or parent companies) play a key role in emerging economies. Table 39 displays ESA and ESA factors across the case studies.

Table 39 ESA and ESA Factors across cases

Chemical Company		Utility Company		Oil & Gas Company	
ESA	ESA FACTORS	ESA	ESA FACTORS	ESA	ESA FACTORS
Reputation positioning	Regulation for emission limits	Environmental licensing and mandatory permits	Regulation for extractive projects	Environmental licensing and mandatory permits.	Regulation for extractive projects
Pollution control	Highly regulated sector for workers and environmental protection	Development of social projects required by law	Community pressure	Pollution control	Community pressure
Lobbying activities		Substitution of toxic materials restricted by law	Manager's compliance perspective	Development of social projects required by law	State owned Company
Reward activities for communities	Community pressure	Reputation positioning		Substitution of toxic materials restricted by law	Manager's compliance perspective
Social projects for reputation management	Public concern about the use of toxic materials	Hearing processes		Hearing processes	
	Manager's profits perspective	Reward activities for communities		Reputation management	
		Environmental litigation and lobbying activities		Environmental litigation and lobbying activities	
		Impact mitigation		Impact mitigation	
		Social projects to exchange rewards		Social projects	

Chemical Company		Utility Company		Oil & Gas Company	
ESA	ESA FACTORS	ESA	ESA FACTORS	ESA	ESA FACTORS
Cleaner production	Dynamic business model	Cleaner production	Stable business model	Cleaner production	Stable business model
Environmental standards settings at industry	Parent Company	Good housekeeping and preventive maintenance	Parent Company	Operational efficiency	Green and international competitors
		Fostering electric mobility		Biodiversity conservation projects	NYSE

Bank		Agri-business association		Cosmetic Company		Dairy Company	
ESA	ESA FACTORS	ESA	ESA FACTORS	ESA	ESA FACTORS	ESA	ESA FACTORS
Green bond issuance	Green markets	Development of organic products	Green markets	Greener products with more natural ingredients	Green markets	Carbon neutral products	Green markets
Financing of green projects	International credit providers	Cleaner production	International green competitors	Sustainable buildings	Green industry	Lighter packaging	International credit providers
Green due diligence when granting a loan	Dynamic business model	Sustainable agricultural practices	Dynamic business model	Alternatives to testing products on animals	Dynamic business model	Cleaner production	Dynamic business model
Cleaner production	Manager's societal perspective		Manager's profit perspective	Social entrepreneurship investments	Manager's profits perspective	Social projects	Manager's societal perspective
Green buys				Cleaner production		Biodiversity conservation	
Product stewardship				Biodiversity conservation			

5.4. Conclusions

In response to the secondary specific objective of this work, the sample was checked for literature-reported ranges of ESA and ESA factors. Interesting results were related to the dissemination of green processes (i.e. cleaner production) across case studies and the transfer of the environmental capabilities of a local company to a Multilatina company due to their different levels of environmental performance. When the Multilatina company acquired the local company, it also acquired its environmental capabilities, which had been locally recognized by environmental authorities as an environmentally sustainable company.

Regarding observed ESA, strategies mainly corresponded to green products (focused on product innovation and the market) and green processes (focused on savings and process improvement) in addition to compliance strategies focused on risk management (i.e. environmental licensing & lobbying, pollution control, imposed ecosystem restoration and management of relations with regulators and communities). Some isolated practices, related to green systems design, such as waste exchange and the acquisition of some shared resources have been adopted by some of the cases under study. As these strategies included literature reported ranges, they contributed to fulfilling the secondary specific objective of this research.

As to the specific co-occurrence configuration between ESA factors and environmental strategies, it can be said that: *(i) design of green products is stimulated by profit or societally-oriented managers, green market contexts, and dynamic business models (ii) green processes is triggered by a dynamic business model and a profit-oriented manager in first-mover companies that focused on achieving a competitive advantage and (iii) green processes is also triggered by green industry and parent company contexts in second-mover companies that run stable business models with a compliance-oriented manager.*

These results refined the predictions about the adoption of green processes strategies. Specifically, the results allow contemplating the possibility that green processes became a disseminated strategy among large firms and it may occur, in different ways, according the type of firm (e.g. first-mover or second-mover companies).

Besides, green market and export market contexts attract more dynamic business models and societally or profit oriented managers. These purported interactions between ESA factors allow further speculating if specific ESA factors tend to be present, to stimulate the adoption of specific environmental strategies such as green products design. Hence, interaction between ESA factors constitutes, among others, a promising research avenue that could be fruitfully explored in the future.

6. Discussion

Several aspects of the analysis of the data presented above convey important meanings: First, the fact that the data refined the hypothesis for the adoption of green products strategies and establish an additional hypothesis for the green processes strategy; second, the simultaneous presence of factor-strategy can be correlated to previous literature reports; third, the implications of a disseminated strategy in large Colombian firms associated to green processes triggered by voluntary programs, green competitors and parent companies that echo previous literature reports; and fourth, a series of more general comments on the social responsibility of the studied companies in the Colombian context as proper of an emergent economy, which exhibits certain specificities in large Colombian companies.

These purported interactions between ESA factors allow further speculating if specific ESA factors tend to be present, to stimulate the adoption of specific proactive strategies

As to the fulfillment of some of the predictions, the results refined the hypotheses by *identifying that the studied Colombian big firms may have developed their green products strategies under the influence of green market and dynamic business model factors, in conjunction with a profits or a societal manager's perspective*. This, however, cannot be extrapolated to Colombian big firms in general, due to the small size of the sample. Said analysis is in close connection with the possibility, albeit speculative, to attribute the presence of certain strategies to that of corresponding factors according to the literature, which is tackled in the lines that follow.

The results allow contemplating the possibility that green processes strategy became a disseminated strategy in large firms and it may occur by normative pressures (i.e. voluntary programs, parent companies and green competitors) exerted in organizational field contexts. Additionally, the results allow contemplating the possibility that green processes may occur to achieve either a more legitimate (supported by compliance oriented managers) or a more efficient operation (supported by profit oriented managers).

There were not found in this study environmental strategies focused in green systems design. It is good to mention though, that some isolated attempts have been performed in that direction but haven't been systematically deployed by the firms under study. It is possible, then, that Colombian cases are in a stage of previous evolution of maturity and strengthening of their capabilities, which still does not allow them to develop green systems. Over time, the maturation of the markets and the evolution of business models may allow companies to adopt such strategies.

6.1. Insights from the empirics and conceptual model

Results allowed researcher to refine the conceptual model by understanding how *context, model and manager* play out in reality.

Insights from field work allowed to strengthen the model by exposing the need to make a distinction between first-movers¹⁶ and second-movers¹⁷ companies. Empirical work showed that first-mover companies may adopt an environmental strategy to achieve a competitive advantage through technical efficiency while second-mover companies may adopt an environmental strategy as a way of keeping up with competitors in order to achieve legitimacy.

As a consequence, empirical work showed that first-movers required the support of dynamic business models (e.g. innovative capabilities, technical efficiency) and profit-oriented managers (e.g. those to want to achieve a competitive advantage) in order to take advantage of an operative efficiency (e.g. green processes strategy) before their competitors. Results also showed that second-movers' companies were able to adopt an already disseminated strategy with a stable business model and a compliance-oriented manager. Concluding, when firms adopt a novel strategy earlier than their competitors require specific types of business models and manager's perspective in order to support and take the risk ahead of industry. As a consequence, first movers are willing gain a head start on the competition even if including high development cost or risks as is documented by the literature (Naveh, 2004; Cleff, 2012, Przychodzen, 2020), while second movers can copy what first movers do and avoid initial development costs.

An additional insight from the empirical work is the key role that local voluntary programs and international green financing have had in the dissemination of the adoption of environmental strategies in Colombia. Specifically, voluntary programs have focused on capability building towards green processes along the value chain of anchor firms while international green financing has driven local banks in the development of green bonds, the financing of sustainability buildings and the inclusion of green requirements in the due diligence of loans.

Finally, empirical work allowed researcher to illustrate, through the model, how a typology of factors such as green markets, dynamic business models and managers with a profits or societal-oriented focus, convey for the adoption of a green products strategy. It can only be speculatively asserted that dynamic business models are required to support the adoption of green products because it constitutes a vehicle to increase their portion of the market by taking advantage of market opportunities with their current capabilities. Additionally, it seems plausible to expect that profits or societal-oriented managers play a key role in emerging economies because the former are focused in achieving market

¹⁶ Early adopters of environmental strategies in order to take advantage of a market opportunity.

¹⁷ Late adopters of environmental strategies in order to avoid uncertainty.

efficiency gains while the last ones are focused in social innovation in addition to efficiency gains.

6.2. Co-occurrence between ESA and ESA factors

Although the present methodology does not allow directly detecting any cause-effect relation between ESA and ESA factors, the simultaneous presence of factor-strategy (Table 40) can be correlated to literature reports and analyses.

In Bank and Dairy Company, greener products (i.e. green bonds and CO2 neutral products) were observed in conjunction with *green markets* (cf. Hoffman (2001)) and *dynamic business models*, as also reported by Aragon & Correa (1998), Boons (2009), and Eisenhardt & Martin (2000). In this respect, Reinhardt (1998) argues that the development of green products is only possible if, in addition to green markets, there is a business model (Wadin & Ahlgren, 2019) that facilitates the process. Green product differentiation has been considered to be under favorable alignment with business model redesign (Bocken et al., 2014; S Schaltegger et al., 2012) and dynamic business models (Boons (2009)).

In Agri-business Association, the development of organic products - for them to be positioned in export markets - appears together with a manager's profit orientation, while in Utility Company, impact mitigation and reputational strategies appear in conjunction with a manager's compliance perspective. Along these lines, the literature explains the link between market oriented strategies (i.e. green products) and *profit-oriented managers* as a result of the contribution of such strategies to corporate economic performance (Russo and Fouts, 1997). Other authors have credited this link to managers' interpretation of environmental issues as opportunities to be hunted (Sharma, 2000) and to their "need to deliver shareholder value with intensifying demands for improved environmental performance" (Reinhardt, 1998). Finally, literature has found as well that profit-oriented managers are more likely to engage in eco-products that "directly connects to [economic efficiency] and corporate financial performance but are less likely to engage in environmental protection strategies" (Cho & Lee, 2019).

Besides, the literature attributes the relation between compliance focused strategies (i.e. impact mitigation and reputational practices) and compliance oriented managers to both their interpretation of environmental issues as a threat and their willingness to minimize any possible losses (Sharma, 2000). Furthermore, an additional stream of literature establishes that companies adopt certain strategies according to their most powerful stakeholder groups and dedicate their resources to satisfy such groups (Brulhart et al., 2019). Finally, it seems that authorities and communities were the central stakeholders to the Utility Case, because its operation approach has been extractive in environmentally sensitive areas.

In the Cosmetic Company, the development of green products (use of natural ingredients and alternatives to testing on animals) was observed together with the influence of *green markets* (sensitivity of customers towards environmental protection) and green industry (i.e. successful international competitors). In this sense, the literature has reported that

green market contexts drive the development of greener products (Shrivastava, 1995; Christman, 2000) and green supply chains (Zhu et al., 2007), especially when they take part in broad markets (Montiel 2009). It is also noteworthy how this company, which is supported by a *dynamic business model*, developed a green products strategy. Literature has reported how the adoption of such strategies has been associated to the variation of dynamic markets and to corporate adaptation to changes in the general business environment (Cockburn, Henderson, & Stern, 2000).

Along these lines, it is worthwhile noting that both Bank and Dairy Company exhibit some interesting similarities. The former is prompted by its main competitor and the IFC to develop green bonds and promote the greening of industrial customers. Likewise, Dairy Company is influenced by its competitors and the IFC to develop carbon neutral products and the greening of the supply chain. Both businesses hold dynamic business models that have allowed them to develop green products (i.e. green bonds in Bank and carbon neutral products in Dairy Company) and support to stakeholders, namely customers in the case of the bank, and the supply chain in the case of the dairy company. These orientations have allowed both companies to become more sustainable, which has been achieved through green financing on the part of the bank and through the development of organizational capabilities and the transference of best practices to farmers by the dairy company. It can only be speculatively asserted that normative (i.e. green requirements from international credit providers) and mimetic influences (green competitors) play a key role in emerging economies when companies run a dynamic business model. As a consequence, it can be said that in both cases *green market contexts* and *dynamic business models* conveyed for the adoption of green products strategies.

Manager's societal perspective was identified by the current research in Bank & Dairy Company as an influencing factor for the adoption of green products strategy in conjunction with social innovation and the adoption of strategies in transition to a green systems design (i.e. strengthening green supply chains and capability development in communities). This type of relation has been previously reported, in connection with corporate contributions to society (Carroll, 1991; Schwartz & Carroll, 2003) according to its needs (Miles, 1987) and beyond the economic and legal obligations of the firm (Loe, Terry, Ferrell & Mansfield, 2000). In that direction, an additional stream of literature has identified how managers can reconcile different practices to integrate a societal perspective into business (Martinez et al., 2021).

Summarizing, green markets, in conjunction with dynamic business models seem to convey for the adoption of green products strategies. These are mainly associated to green bonds, organic and carbon neutral products and the greening of the supply chain or the specific sector through standard settings or the development of organizational capabilities. In addition, it is interesting to note how, despite their differences, societal-oriented and profit-oriented managers also convey for the adoption of green products strategies. The latter managerial orientation mainly focuses on the market and operational efficiency, while the former is directed towards social innovation, in addition to market and efficiency gains.

As to the green products adoption case, allows contemplating the possibility that, for example, green market contexts attract both dynamic business models and societal or profit-oriented managers. This is a reasonable speculation based on the fact that, all case studies that were under the influence of green market contexts, exhibited a green product strategy, which could be attributed to purported interactions between ESA factors. For example, in observing a particular context, the Board of Directors of a company appoints a manager that is capable of coping with the situation by prompting a corresponding business model. Accordingly, ESA factors would tend to cluster around their associated strategies. Consequently, the present case-studies not only prevent discarding the hypotheses (i.e. they support the model), but allow refining it as well (they suggest interactions between ESA factors), for the sake of future studies.

In turn, Chemical Company runs a dynamic model supported by operational efficiency and R&D capabilities that have allowed them to redesign their processes and achieve efficiency in order to minimize waste and emissions and reduce water, energy and raw material consumption. For another thing, the company is influenced by authorities and public concern about the toxicity of the main component of their products. It is curious, though, that Chemical Company maintains the chemical agent of concern in its products in spite of public and authorities' pressure and their collaborative R&D capabilities.

This may be due to the fact that their products are part of an expanding market that is expected to reach US\$88 billion globally by 2027 (Reports and data, 2019), which is certainly good for business. Therefore, substituting this component is probably not the best strategic option when comes to prevailing in a highly competitive market. Additionally, this situation can be attributed to a lack of capabilities for green product design on the part of the company, or an unwillingness to take the risk of an unknown result of a R&D process.

This combination of strategies and factors might have led this company to achieve an environmental leadership in its industrial sector by adopting a green processes strategy and, thus, distinguishing itself as a green company. A reason for this company to adopt a green processes strategy could be associated to their need for brand positioning and reputation management to balance off the public and authorities pressure on the firm.

Additionally, Utility Company and Oil & Gas Company exhibit the influence of *regulation* in conjunction with compliance strategies such as environmental licensing and substitution of restricted toxic materials. The Regulation is considered to be the main influencing factor for the adoption of compliance strategies (Petulla, 1987, Miles, 2000, Aragon, 2008, Boons, 2009, Sharma, 2001), which are usually implemented in these commodity-based businesses (M. P. Miles & Covin, 2000). Some other strategies found in these two companies are pollution control, process improvement, good housekeeping and preventive maintenance, which have been associated to *stable business models* by Boons (2009). Additionally, in both companies the adoption of these compliance strategies in association with law enforcement can be reasonably attributed to the influence of their compliance oriented managers as it has been reported in the literature by Downing and Kimball, 1982. Still, a green process strategy was identified at the Oil

& Gas Company, probably as a way to achieve legitimacy before competitors and public opinion.

6.3. Green processes: a dissemination strategy in large Colombian firms?

Additionally, the green processes strategy was observed in all the cases, probably in response to an instituted normative pressure exerted by organizational field contexts. In Colombia, key business and academic initiatives have been developed for the dissemination of the green processes strategy in order to achieve a sustainable development.

One of these initiatives is the Colombian Business Council for Sustainable Development (**CECODES**), which was created in 1993 to promote the adoption of green processes in large Colombian firms to achieve a sustainable development. Council members include representatives of large firms that represents more than five per cent of Colombia's GDP, about US 5,600 million a year in exports, and accounts for more than 600,000 direct and indirect jobs (WBCSD, 2020).

RedES, a partnership between Universidad de Los Andes and CAR¹⁸, developed a program focused on the dissemination of green processes among enterprises in emerging markets based on value creation through supply chain integration. Program was created in 2013 and with the commitment, through the years, of near 800 Colombian companies has accounted for the development of sustainability projects related to cleaner production, energy efficiency and closed loops (H. Gomez & Van Hoof, 2015; Van Hoof & Thiell, 2015).

Additional initiatives from the Chamber of Commerce and Industry Association have also engaged firms in the adoption of sustainable operational practices. As a consequence, it can be speculatively asserted that the institutionalization of green processes, in large Colombian firms, has occurred in response to normative requirements (i.e. voluntary programs,) from the organizational field context - driven by public-private partnerships towards sustainability – in addition to the influence exerted by the business environment (e.g. competitors and parent company). The literature on the topic has reported how the multiplicity of stakeholders and their increasing pressure create uncertainties in the business environment, which has led to the adoption of green processes strategies as a corporate adaptation to changes (Prakash, 2000).

6.4. Social responsibility in an emergent economy

The studied companies exhibited a variety of ways to couple with the specificities of the Colombian social context as a leading country in the third world. In this sense, the first contrast results from observing the different companies in light of the type of business model run by the firms. Finally, a series of broader comments allow some insight into ESA in emergent economies.

¹⁸ Local authority in the state of Cundinamarca, Colombia

6.4.1. Social responsibility in companies that run a dynamic business model

Although the companies, that were found to run their business under a *dynamic* model, kept their own attributes and differences, they all shared some common characteristics such as being led by inspiring managers (recognized by employees and counterparts), long-term companies (more than 50 years in the market) expecting to develop long-term objectives and collaborative work for product development and innovation in Colombia. Besides, these companies were able to develop alliances with local governments and cooperation funds in order to deploy social innovation projects. Additionally, they used their own production lines and R&D capabilities as leverage to perform joint projects with communities, who acted not as passive recipients of the benefits, but as associates in the social projects.

It is important to observe the active participation of these companies in the development of social innovation projects, as a way of attending societal needs while generating economic benefits. The participation of the companies that were running a dynamic business model, may be driven by two main factors: On the one hand, a business context full of societal needs such as financial inclusion, nutrition, educational gaps, health services, sanitation facilities and road infrastructure, among others. On the other hand, a group of companies (most of them *multilatinas*) running dynamic business models supported on innovative capabilities and directed by managers that identify economic opportunities to generate social and reputational benefits.

For example, Bank developed a pioneering financial product to serve people under economic vulnerability at no cost, at the bottom of the pyramid (this e-pocket has covered more than 2,5 million users), thus lowering the bank's operational impacts and costs. For its part, Dairy Company founded a program for the regions that have been affected by violence, in order to motivate and build abilities in young farmers, for them to remain in the rural areas and perform better practices to achieve high quality products in a sustainable way. This program has benefited more than 13.000 small dairy farmers that produce around 50 liters of milk per day.

6.4.2. Social responsibility in companies that run a stable business model

As to the companies run by a *stable* business model, they certainly have their specificities, since they had to cope with towering challenges. If these cases are compared, it is noticeable that one of the fundamental challenges for those companies is associated to the geographical location of their extraction projects. For example, the hydropower project of Multinational Utility Company is located in an agricultural region and has to cope with forest vocation lands, whereas the exploration and oil extraction projects of Oil & Gas Company are located in more than 53 municipalities of the country. Both companies are confronted with very different challenges compared to those faced by the extraction companies from North America and Europe. Specifically, Oil & Gas Company has to deal with the social needs of communities related to health services, education facilities and roadways construction that are not part of the company's main business purpose. On the other hand, the relations between Utility Company and the local communities have certainly been more complicated, experiencing backward steps to implement the hydropower project. A range of environmental incidents occasioned by the company have

actually diminished trust on the part of the communities. Therefore, the company has constantly had to find ways to approach them in order to improve its reputation.

From the results, it seems that the companies that are run by a stable model, work on the adequacy of their environmental practices in compliance with local regulation. However, they do so in different ways. For example, Oil & Gas Company deploys broader and deeper activities, given the amounts of investment, type of projects and geographical scope. This is probably due to its public nature and presence all over the country, coupled to its social engagement in the transformation of the municipalities (i.e. financing of aqueducts and biodiversity conservation programs) in conjunction with communities and authorities. On the other hand, Utility Company is a subsidiary of a transnational holding, which essentially relies on international capital and has had three different foreign owners over the last 20 years. This may have affected the preservation of the culture of the company during its presence in Colombia and their plans to perform long term, deep and broad environmental practices. The literature reports that company culture during property transfers affects decisions and willingness to implement strategies (Deloitte, 2005).

The studied companies did not perform strictly social innovation projects, in the sense of taking into account community needs, facilitating the empowerment of social groups and establishing those groups as associates to perform social innovation. Nonetheless, these companies performed projects focused on establishing benefits for communities in terms of charitable giving, volunteering in the community and funding sports and recreational activities. Besides, such cases established a dialogue with environmental advocates for the mitigation of reputational and operational risks and the implementation of a brand positioning strategy as a green, sustainable and socially concerned industry.

6.4.3. A broader view of ESA in emergent economies

It is noticeable how all of the companies, running dynamic and stable business models, deployed corporate social programs in addition to environmental strategies. These social programs focused on different areas such as nutrition (i.e. donation of 1.5 million liters of milk per year), scholarships for university education, recreation and sports (i.e. promotion of values triggered by sports for more than 600 children per year), co-financing of aqueducts for municipalities (these solutions have served cities with a population of 1 million people) and the promotion of local cultural activities (such as traditional dancing) among others. Having specific priorities, each social program differed in the amount of funding from the Colombian companies and the type of alliances that were built with the government, universities and international development agencies to gather additional resources.

The differences found among the different environmental strategies in the case studies relied on the way the organization delivers value and on its final recipient. The observed green products and green processes strategies were found to deliver economic value to shareholders and to create environmental value for consumers and society through green solutions and the improvement of the environmental performance of the firm. As a consequence, value is mainly created through the fulfillment of market and consumer demands, in addition to shareholder demands.

On the other hand, the compliance strategies were found to deliver economic value to shareholders through the management of economic risks and reduction of legal liability

by adopting environmental litigation, lobbying activities, pollution control, pollution compensation or ecosystem restoration practices. In such cases, value was mainly created to satisfy the demands posed by regulators, communities and shareholders. As a consequence, the firms were found to respond differently (i.e. green products or environmental litigation) to distinctive ESA factors (green markets or regulation).

7. Conclusions and future research perspectives

This chapter displays the main findings with regard to the main research question: *What are the factors that drive Colombian big firms to adopt environmental strategies?* Later, it is addressed how influencing factors convey for the adoption of environmental strategies in connection with the proposed framework as one of the main contributions of this research. Finally, it is presented some of the future research avenues that could be fruitfully explored.

7.1. Answer to main research question

Findings showed that green products strategy is adopted because of the preponderant role of export green markets and international credit providers, hand in hand with dynamic business models (See Table 40. Factors that drive the adoption of environmental strategies).

In addition, it was interesting to note how, despite their differences, profit and societally-oriented managers also convey for the adoption of green products strategies. The former managerial orientation mainly focused on market and operational efficiency, while the latter was directed towards social innovation, in addition to market and efficiency gains.

In turn, the adoption of green processes varies according to the early or late adoption made by the companies. Specifically, while first-mover companies were triggered by a technical efficiency to achieve a competitive advantage, second-mover companies were triggered by a normative pressure to avoid uncertainty and catching up with competitors. Finally, green processes and green products strategies have been disseminated by the effect of voluntary programs and green financing across industry.

Table 40 Factors for the adoption of environmental strategies

Strategies Factors	Green processes for first-mover companies	Green processes for second-mover companies	Green products development	Green products development + social innovation
Business context	Competitive market	Green competitors	Current export and green markets	Current export and green markets
Business model	Dynamic	Stable	Dynamic	Dynamic
Manager's perspective	Profits-oriented managers in order to achieve a competitive advantage	Compliance-oriented managers in order to achieve legitimacy	Profits-oriented managers focused in achieving market efficiency gains	Societal-oriented managers focused in social innovation in addition to efficiency gains

7.2. Contributions

- Understanding the co-occurrence of multiple factors for the adoption of environmental strategies.

Conceptual model illustrates the way influencing factors convey for the adoption of specific environmental strategies. Thus, it is highlighted a simultaneous presence of specific types of influencing factors according to specific environmental strategies such as green processes (focused on the improvement of operational efficiencies) and green products (focused on improvement or development of the environmental attributes of a product in order to achieve a better position in green markets).

While previous research studies separately examine the influence of context, business model and manager's perspective on Environmental Strategies Adoption, the question on how factors, through a unified overview, convergence for the adoption of environmental strategies had been left aside.

Multilevel analysis allowed the researcher to access information from complementary sources (e.g. interviews, public documents) in order grasp a broad understanding of corporate sustainability management. Thus, the main contributions of the present work are the development of a conceptual framework and its preliminary empirical testing through seven case studies in Colombian big firms. Model is useful for researchers in

order to understand the co-occurrence of multiple factors in the adoption of strategies.

Along with the concern about ESA and its influencing factors, there has been an increasing interest in the configuration of influencing factors (i.e. context, model and manager's perspective) and how it helps to reconcile the differences and tensions among those influencing factors (Bjerregaard & Jonasson, 2014; Lawrence et al., 2011).

Additionally, managers lack of a framework for deciding which strategies (i.e. cleaner production or greener products) are best for their particular company's context. The proposed model can help managers to understand the nature of any environmentally responsible behavior demand or interest. Thus, the theoretical model is not only a useful guiding research tool, but also as a decision making one, since it can perform as a central scorecard for policy makers and company managers. On these grounds, it can be said that the first step in devising an effective environmental strategy is to consider the nature of the demand from the business context, in conjunction with the firm's business model and the manager's perspective towards the adoption of environmental strategies.

Finally, companies can discern their current status in relation to environmentally sound strategies, and knowing that they can move towards the adoption of additional strategies to improve their performance. As a consequence, the theoretical model is a useful guiding tool, to establish the adoption of future environmental strategies and establish an action plan within the company to build the capabilities required for such adoption.

- Policy development for stimulating the adoption of environmental strategies.

The present findings also contribute to policy development when it comes to stimulating the adoption of environmental strategies, since they are useful to promote the conditions that stimulate such adoption. For example, research has established the effect of voluntary programs in the dissemination of greener processes (i.e. cleaner production) and of green financing in the development of green products strategies in large Colombian firms. As a consequence, present findings could contribute to managers of policy in the transformative change of policy to be integrative to local conditions and adaptive to moving targets for promoting the environmental strategies adoption (Visseren-Hamakers, 2021).

Literature has posed the impact of voluntary programs in eventually substituting the command and control focus of regulation. Because of that, the integration of Colombian environmental protection policy to voluntary mechanisms constitutes an opportunity to achieve efficacy in regulation deployment. Finally, policy managers could use the insights of this research about the main influencing factors in which the adoption of green products or green processes occur and in which industry sectors voluntary environmental actions could be more effective.

In that respect, export markets come up as important agents of change when the focus is put on the development of green products by firms that run a dynamic business model to achieve competitive advantage. Such considerations are particularly useful in the implementation of sustainable processes for firms to enter new markets or receive green

financing. Examples of green financing include the developing, promoting, implementing and supporting projects with sustainable impacts through financial instruments such as green bonds, green-tagged loans and green investments funds (Intracen, 2020).

7.3. Limitations and directions for future research

- Configuration between influencing factors for the adoption of specific strategies.

Conceptual model illustrates the co-occurrence configuration between influencing factors for the adoption of environmental strategies. Although the model highlights the simultaneous presence of specific factors in the adoption of specific environmental strategies, it may not be able to describe the relation of causality between factors and strategies or to establish the relative importance of factors when influencing the adoption of strategies.

The purported configuration between influencing factors for environmental strategies adoption provides a very interesting and potentially fruitful research perspective for the future. In a more general sense, any further testing of the proposed model will help to refine the conveyance between different influencing factors and environmental strategies modalities.

Empirical findings from this research complements institutional theory, RBV and CSR as it establishes how business context, business strategy and manager's perspective, through an integrative outlook, convergence in the adoption of specific environmental practices.

First, it is proposed that green markets influence the adoption of green products strategy but this relation is contextual, dependent on the type of business model that is run by the firms. Specifically, empirical work specified that firms running a dynamic business model adopt green products as a way of taking advantage of a market opportunity.

Second, findings established specific firms' capabilities that support dynamic business models associated to green products strategy. For example, it was found a relation between a green products strategy and dynamic capabilities such as innovation, R&D and organizational learning. Findings also identified a relation between the adoption of a green products strategy and strategic capabilities related to management of brand, development of green and social marketing, standards settings, product positioning and management of stakeholders.

Third, manager's perspective influences the adoption of environmental strategies in different ways. Specifically, managers with a societal-oriented perspective in firms that run a dynamic business model propelled social innovation projects (e.g. supply chain capability development and novel products toward societal needs) in addition to environmental awareness and green innovation at their organizations. On the other hand, managers with a profit-oriented perspective, in firms that run dynamic business models, supported green products development according to market demands in conjunction with

social responsibility projects (e.g. financing of infrastructure, schools and cultural activities).

These results extended the explanation of Genc (2013) about the relation between a green products strategy and the role of managers. She found that “managers partially mediated the relation between context and a novel strategy” but she didn’t delve into the nuances of how the different manager’s perspective contributed to the environmental strategy adoption in connection with the business model.

In relation to managerial perspective for environmental strategies adoption, most studies relate the manager’s profit focus with a corporate environmental strategy that provides financial returns. Findings along case studies, of this thesis, contribute in identifying the key role of business model in the type environmental strategy adopted which is an additional distinction from previous studies. Findings exposed how business model integrates with manager’s perspective and the business context. Accordingly, empirical ground is offered to propose that there occurs an adequate alignment between these three elements: manager’s perspective, business model and business context.

In a more general sense, any further testing of the proposed model will help to analyze the co-occurrence of different influencing factors and environmental strategies modalities. Along these lines, it is important to highlight what seems to be the key role of managers in the adoption of specific environmental strategies, in alignment with the firm’s business model and context. Previous studies only relate the manager’s profit focus with a corporate environmental strategy that provides financial returns. However, those approaches do not integrate additional influencing factors such as green market context and dynamic business model for a green products strategy in conjunction with a manager’s focus beyond compliance.

- Analysis of environmental strategies adoption in small and medium enterprises.

The aim of this research has been to contribute to an understanding of how large firms adopt environmental strategies because large firms are less limited by resource scarcity in emerging economies (González Benito & González-Benito, 2006) and are therefore, relatively free to adopt environmental strategies.

In this respect, it would be interesting to conduct further studies on small and medium sized companies in the third world. The application of the conceptual model in SMEs is useful for stablishing their current environmental strategies and the contextual factors that have facilitated or impeded their transit toward environmental strategies adoption.

Also, the development of new empirical work will enrich the model in order to refine the co-occurrence of the influencing factors for the adoption of specific environmental strategies for SMEs and to establish the role of particular conditions (e.g. family ownership, anchor firm and SMESs linkages) in such adoption. Just as well, a comparison of influencing factors can be established between small companies and large firms.

- Comparative analysis across different latitudes

The findings of this research, as framed in the Colombian context, will be relevant for other emerging economies in terms of understanding the environmental strategy adoption process. However, in different settings, the present framework may require the incorporation of additional factors such as resource scarcity or more restrictive regulations.

This is particularly significant because, according to UNESCO (2016), Latin America is a key location for environmental research since Brazil, Colombia, Ecuador, Mexico and Peru constitute five of the ten most biodiverse countries in the world. Therefore, those countries require an adequate corporate sustainability management strategy to protect the environment.

According to Jabbour and Jabbour, 2014, Latin American publications have relatively low international visibility and because of that, promotion of sustainability research in Latin America opens the door to further and broader research in the field. In this sense, to develop empirical work in a country such as Colombia constitutes a key contribution because of the current scarcity of empirical work in the region.

8. PROPOSITIONS

1. An integrative model that links business contexts, business models and manager's perspectives, helps to understand the convergence of influencing factors for the adoption of environmental strategies.
2. Adoption of environmental strategies in large Colombian businesses implies development of eco-products, cleaner production and complying with legislation.
3. The development of eco-products is mainly influenced by green markets, dependent on dynamic business models and the support of managers willing to take advantage of a market opportunity.
4. Profit and societally-oriented managers convey for the adoption of eco-products and differ in market orientation, operational efficiency and social innovation.
5. The implementation of cleaner production strategies in first-mover companies is motivated by a market opportunity to achieve a competitive advantage supported by dynamic business models and profit-oriented managers, while in second-mover companies the adoption of environmental strategies is motivated by a normative pressure to avoid market uncertainties and achieve legitimation hand in hand with stable business models and compliance-oriented managers.
6. Influencing factors for environmental strategies in emerging economies enhance inclusive sustainability practices.
7. Authorities and communities are the prior stakeholders to extractive companies, implementing environmental and social licensing as their main strategies, while green markets may be the key stakeholders for consumer goods companies, implementing strategies toward eco-products and the greening of the supply chain.
8. Business models shift toward sustainability drive the development of sustainable innovations by connecting firm's capabilities and value creation to achieve a sustainability and long-term perspective.
9. Transformative change of policy, including voluntary programs and specific industry conditions, enhance the dissemination of environmental strategies in emerging economies.
10. Financial instruments for the development of eco-products show important agents of change in firms that are prepared to enter in green and mature markets.
11. To follow a PhD journey is like paddling a canoe in a meandering river in Colombia: full of methodological challenges, living narratives and empirical confusion.

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Annex 1

Portfolio of the promotion trajectory

Title: The adoption of environmental strategies in large Colombian businesses.

PhD Candidate: Carlos Eduardo Fúquene Retamoso.

Program: Off-campus Ph.D. Program on Cleaner Production, Cleaner Products, Industrial Ecology and Sustainability.

This document presents the promotion trajectory followed by the doctoral student during his research work derived from its central hypothesis and field work in large Colombian businesses, *i.e.*, the series of propositions according to which ESA varies as a function of the co-occurrence of business context, business models and manager's perspective factors.

Fundamental milestones had to be achieved during promotion trajectory namely formulation of research plan, carrying out a literature review, conceptualization and operationalization, conducting research and collecting results, writing of the full chapters and delivery of the manuscript (Figure 1. Milestones of the promotion trajectory).

- Formulation of research plan

Research plan included initially the definition of the problem (e.g. *the adoption of environmental strategies, which has been scarcely explored in emerging economies*) and the presentation of the literature addressing such research problem (e.g. Institutional theory, Resource Based View and CSR).

After various iterations about the scope of initial research plan with tutors and staff, there were configured a set of research questions and developed a research methodology. Research plan was and presented at each annual intensive (e.g. encounter of all students with tutors and staff) in order to describe progress, receive feedback from tutors and outline future plans.

Additional feedback was received from the academic community during the candidate's participation at international conferences held in Sweden (Greening of Industry Network conference) and Spain (Global Cleaner Production and Sustainable Consumption Conference).

- Conceptualization and operationalization

Building on theories used in the environmental management literature, it was developed a conceptual model to understand the influencing factors for Environmental Strategies Adoption (ESA) in large Colombian business. These are the business context, the business models and the manager's perspective.

Co-occurrence configuration of influencing factors was proposed at the conceptual model as a way of establishing a criterion for measuring the conveyance of factors for the adoption of specific environmental strategies. As a consequence, a typology of environmental strategies was arranged as a framework for analysis for this research. This typology discriminates between green processes, green products and green systems strategies. Accordingly, conceptual model provided insight into ESA influencing factors at three different dimensions: business context, business model and manager's perspective.

- Conducting of research and collecting of results

The adoption of environmental strategies was studied through a qualitative approach (e.g. interviews or analysis of pertinent documents) that allowed an interpretative process focused on the assessment of the phenomenon in its natural context such as the Colombian cases.

For case selection, it was necessary to identify a number of purported "green" companies to conduct research on. Later on, a qualitative analysis allowed identifying the factors and strategies of each one of the studied companies.

The transcripts of each interview and public documents were carefully read, thus delimiting or underlining the textual fragments to identify ESA factors and environmental practices across the cases. The data in each of the transcripts and public documents were coded according to the ESA factor (e.g., context, business model and manager's perspective) or environmental strategy classification systems employed for the present work.

- Writing of the full chapters

The structure of the manuscript was configured as follows. Section 1 includes the introduction of the topic, the motivations for developing the thesis, followed by a statement of the theoretical problem, the research questions posed, research methods and the overall relevance of the study. Section 2 presents a literature review to identify relevant studies about environmental strategies adoption and the main theories about the corresponding factors. A framework for the adoption of environmental strategies is also presented in section 2. The research design and methods are specified in section 3. Section 4 presents the case studies. The analysis of results is presented in section 5, discussion is exhibited in section 6 and conclusions, contributions and recommendations for future research is presented in section 7.

- Delivery of the manuscript and defend of the completed thesis

During 2020, the manuscript was sent to the tutors in order to receive their review and feedback. This revision exercise made it possible to strengthen the document and refine the language of the thesis to facilitate its understanding by the reader. Additionally, in August 2020, a mock defense presentation was held as a rehearsal for receiving comments, from tutors, about the whole research and dissertation process.

MILESTONES

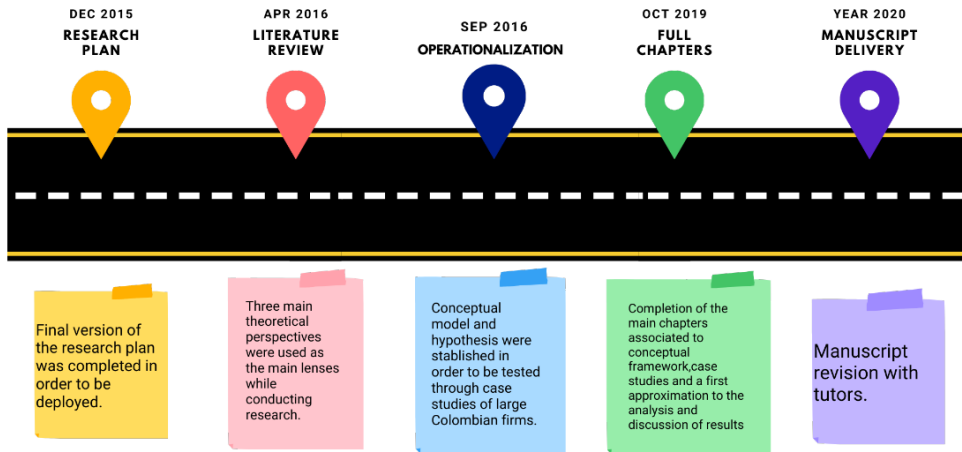


Figure 1. Milestones of the promotion trajectory