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Corporate social responsibility communication from multinational chocolate companies

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ABSTRACT

Society and governance require multinational companies to adopt sustainable behaviour, looking at Corporate Social Responsibility. This study analysed the largest chocolate and cocoa producers in 2021 focusing on their communication strategies. The objective was to identify how these companies communicate their sustainable practices, finding the communication patterns of their CSR. Our findings show that the largest chocolate companies have integrated sustainable issues by focusing on environmental aspects. Several profiles of communication closer to social issues were also identified but no business company creates its sustainable value strictly on human resources as category.

1. Introduction

The chocolate sector is an important part of the confectionery industry and its global market value exceeded EUR 105 billion in 2021 and is expected to grow at an annual rate of 3.7 % from 2022 to 2030. The global chocolate market is segmented by product type (dark, milk, or white chocolate and with other ingredients), distribution channel (online e-commerce and physical shops) and geographically. There are regions of the world where the market share of chocolate confectionery products is financially higher: Western Europe covers 33 % of the market share, followed by Eastern Europe, Middle East and Africa area with 24 % and North America with 22 %; this value decreases in Asia Pacific (14 %) and South America (7 %) [1]. Although small artisanal producers remain important, only multinationals are becoming a dominant player in the intermediate and manufacturing production of bars and other chocolate preparations [2]. According to studies conducted by the International Cocoa Organization (ICCO), the ranking for 2020 (based on the net sales of each company in 2019) (Table 1) presents the US Mars Wrigley Confectionery as the number one chocolate company in the world, beating its competitors by more than 5 billion US dollars in net sales. Ferrero Group, Mondelez International, Meiji Co ltd, Hershey Co, Nestle, Lindt, Pladis and Glico were the next leading chocolate companies worldwide.

In this dynamic and competitive market, corporate social responsibility (CSR) becomes important and represents one of the

elements of product differentiation. The creation of sustainability web page, in which social, economic and legal issues are involved, is essential for branding enforcement [3]. This new competitive environment improves and increases the importance of socially responsible investments to empower the reputation of companies [4]. Working condition, support to farmers, environmental sustainability and respect for human rights have become the main aspects of CSR [5]. In light of the above, companies, governments and scholars have turned their attention to supporting sustainability, especially in the supply chain of raw materials such as cocoa [6]. In an increasingly digital world, where consumers and generally stakeholders, search for product information on the web, companies are interested in communicating their CSR programmes efficiently [7], considering both the multidimensionality of sustainability and the need to use sustainable development to create differentiation [8]. Nevertheless, some companies have underestimated sustainability communication strategies as a success factor, keeping financial investments for sustainability promotion to a minimum [4]. The communication is the instrument through company presents its objectives and achievements in term of CSR initiatives. Although CSR is not designed to promote marketing strategies of the company, but the effective communication of positive initiatives geared towards sustainability could produces concrete effects in improving the company's image and reputation, becoming an integrated part of promotion and marketing activities [9]. Thanks to CSR, stakeholders who come into contact with the company are influenced, positively or negatively, by

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Table 1 Economic, environmental and social issues in the chocolate supply chain [6,47, 48].

Socialocial issues	Economic Issue	Environment issues
Better smallholder livelihoods Gendered exclusion and benefits Farmers' freedom of association and collective bargaining Child and forced labor Fair Salary Equal opportunities and discrimination Health and Safety Gendered exclusion and benefits Access to material resources Poverty Community engagement	Working hours Farmer Education and training Labor laws and conventions	Climate change & CO2 emissions Impact on biodiversity and ecosystem services (deforestation, land, soil and forest degradation) Land use change Non-renewable resource depletion Primary cumulative energy demand

their CSR policy [10]. Following the study of [11] introduce green practices in company activity it's related not only to market future but also to the profitability, demonstrating that pollution prevention and green supply chain management drives financial performance. However, studies conducted from [12] find that environmental and social policy could have be evolved in greenwashing having negative effects on consumer confidence in green products and affect investor confidence in environmentally friendly firms.

In addition, globalisation and the evolution of traditional political backgrounds have changed the influence and the interaction between companies and stakeholders [13]. The expectations and pressures of stakeholders and institutions influence the communication strategies adopted by companies that have become proactive [7] and are based on the country's level of development in terms of social and economic aspects [14].

Global cocoa production increased by more than 208 % between 1980 and 2021 [15]. The cocoa supply chain is one of the longest in the agri-business sector, where the cultivation phase, the chocolate manufacturing process and the delivering worldwide have a strong environment impact in terms of water and energy consumption [16]. As a matter of fact, cocoa cultivation contributes more to deforestation and forest degradation than other commodities, such as beef or soybean [6]. Moreover, almost all cocoa-producing countries worldwide are located in equatorial zone: Côte d'Ivoire, Ghana, Indonesia, Ecuador, Nigeria, Cameroon, Brazil, Peru [17] and for most of them, the political situation presents critical issues in terms of working condition and minimum cocoa price, preventing functional economic development for local populations. The exploitation of local communities and land has led to the emergence of certifications such as Fair Trade, UTZ Certification and Rainforest Alliance to improve social conditions and support families.

The implementation of CSR initiatives from multinationals companies is a process through corporations integrate social, environmental, ethical and human rights into their business operations and core strategy in close cooperation between actors of all supply chain [18]. CSR communications provide to stakeholders more information, involve them in company's activities, contribute to create a greener company image, improve product value [19], and create profitability [20], but also could generate greenwashing effects [12].

Starting to structured organisation of CSR communication oriented towards different models and platforms, companies websites could be one of the tools to communicate sustainable initiatives [21].CSR activities could be proposed on a dedicate page of the company website or on a linked website. In this context, it would be interesting to explore the topics, activities and subjective areas that constitute CSR multinational

companies, shedding light on the stakeholders' interests and how companies meet or fail to meet the CSR information needs of their target audience. Other study evaluates CSR communication activities in Small and Medium-sized enterprises [22] other for multinational companies [23] still others generate a comparison between big and small companies CRS communication [19] but no study at the moment are investigate on different interconnection between top CSR items communicate by chocolate multinational companies on corporate website. This research could fill this gap and give an overview of what and in with way companies communicates CSR activities and goals.

For these reasons, this paper aims to examine the CSR contained in the companies' websites of chocolate chains, in terms of fair trade, human resources, environment and community. Specifically, the purpose is to answer the following research questions:

RQ1. What are the main claims of CSR communication in the largest chocolate and cocoa companies in their website communication?

RQ2. Are there different relationships between categories of CSR communication and companies?

RQ3. Are there different models or patterns of communication according to the CSR categorial code?

Applying Content Analysis, we want test CSR content present on official company website and examine the interconnection between categories of CSR reported on website with marketing issue. This method has been used by several authors to study CSR web pages or reports, and few researches have performed content analysis of the overall corporate website in terms of CSR strategies [14,19,23,24]. According to [14], CSR content on websites was divited in four main dimensions of CSR: environment, human resources, community and fair trade

The following paragraphs describe the conceptual background, the method use for the analysis, the main results, the discussion of the findings, and the conclusion with practical implication and limits.

2. Conceptual background

2.1. Corporate social responsibility

The concept of corporate social responsibility extends to more than one aspect of the sustainable service business. CSR emerged in the United States in the 1960s, when the idea arises that companies have responsibilities to society beyond creating profits. The complexity of this concept can be explained by considering three dimensions [25]: economic, social and environmental. The economic dimension covers the general activities of the business management and governance, regarding ethical behaviour, within the framework of business and honest practices, including product quality and process innovation [24]. The social dimension relates to the role of companies in society in terms of supporting human activities, interaction with the local community [24], job creation and professional and personal growth [22]. The environmental dimension refers to the impacts on the ecosystem in terms of reducing the company's impact on nature [24], with the aim of preserving and enhancing natural capital for future generations [26].

Over the last 30 years, the focus on sustainable development and CSR has become increasingly intense [27]. This concept reshapes business, because it is linked to the improvement of brand image and contributes to the realisation of a good opinion of the company in an institutional context [22,28] to build reinforcing corporate reputation [13]. Furthermore, CSR allows companies to introduce specific strategies and regulations with a positive impact on sustainability while gaining long-term profitability and increasing efficiency [5]. Indeed, sustainability efforts do not immediately lead to improved financial performance, because a lot of investments is required [25,29]; however, in the long term, their impact on consumer perception can pay off in terms of economic efficiency [5,22,30].

As previously anticipated, the communication of CSR could hide negative effects when stakeholders perceive inauthenticity from

content, companies exaggerate or falsely claim their commitment to environmental or social causes causing greenwashing, or when there is lack of transparency [12]. From a general point of view, building a CSR strategy for a company means differentiating itself from other brands. Different chocolate industries are likely to have different sustainability initiatives, depending on their strategies, mission, and policies [8]. On the other hand, if we look only to consumers as one of stakeholders, some studies [31–34] have focused on consumer decision process, showing that social, economic and environmental sustainability, although considered during purchase, is not the most important attribute during the decision-making process. Nevertheless, growing consumer awareness towards the environmental and social impact of multinational corporations could play an important role in the development of marketing communication strategies [3,13], especially in younger consumers [35–37].

2.2. Communication of CSR on website companies

The CSR company communication aims to inform stakeholders of its good intentions and initiatives to secure positive stakeholder support [23]. Communication organization's activities help to improve brand image and achieve commercial benefits (e.g. awareness creation), or social benefits (e.g. understanding society's expectations), or both [13] because they adhere to the socially widespread value system of stakeholders [38]. The task of social media managers is to ensure that a consistent message is delivered in an attractive way and that the messages transmitted through the initiatives undertaken or goals to be achieved address the generally shared concern of stakeholders [23]. Brand image definition and reputation building through CSR take place with marketing activities [28] Framing CSR as, on the one hand, an ethical impulse to do "good" and, on the other, a good practice of corporate and organizational interest to improve brand image [38].

Communication can carry three different types of disclosure: narrative, visual, and numerical [39]. Narrative consist of textual material explaining the value or importance of sustainability, visual consist of graphs showing the evolution of sustainability or pictures with people or landscapes, and numerical consists of numbers with monetary fiscal values or no fiscal values [39]. Some of the intangible values are difficult to measure, yet companies need to find an original way of reporting them to stakeholders, in order to communicate future benefits [30]. Communicating CSR activities to raise stakeholder awareness of sustainability is also difficult, but the same authors point out that reporting CSR efforts positively influences stakeholders and societal perceptions. An accurate and complete representation of the company is necessary [40] and helps to humanise the organisation.

There are two main channels used by corporations to communicate their agendas on CSR topics: the publication of CSR reports and communication inside the corporate website [41]. The internet plays an essential role in CSR communication [24]; in fact, the business website is one of the most widely used tool to convey information, not only about products, but also on the history, culture and values that identify the company [28]; its interactivity with multimodality and hypertext function offers the possibility of introducing videos and eye-catching graphics [41]. On the other end, reports includes more technical information, such as graphs of CO₂ emissions, and are used by companies as vehicles of communication and persuasion towards investors or other key stakeholders [18]. Therefore, one of the main differences between CSR reports and websites is that the former has a B2B approach, while the corporate websites use a B2C approach.

2.3. Corporate social responsibility in multinational companies

Communicating good practices, explaining areas for improvement and achievements is crucial to apply CSR policy in every company.

Before the 2000s [42], there was increasing pressure from stakeholders, governments and institutions on big brands to 'do something' for community development, the environment or global warming, to respond to social problems and to fill the gaps left by global governance failures [13]. Companies had to adopt a proactive strategy in their decision-making processes, but the lack of such pressure on some other companies may encourage the use of the CSR communication platform only for marketing and as advertising material [13]. In this context, Multinational Corporations (MNCs), which make direct investments abroad and own or control value-added activities in more than one country [43], were the first to be involved in this CSR system. Some authors [43,44] distinguish between MNCs that include independent multi-domestic foreign subsidiaries and those that have their affiliates as an important part of a regional or global market. Today, MNCs play an important role because, by setting a good example, they promote sustainability and other CSR practices [45], e.g. charitable activities and volunteering in the community, with the aim of improving corporate image and developing markets worldwide [46]. MNCs are physically distributed in environmental contexts that represent very different institutional configurations in host countries, and therefore adopt different CSR strategies, especially in emerging economies and adopt local CSR strategies [13,40]. This approach is good for sustainability and for promoting brand image, but it requires that CSR strategies, including communication, aim to incorporate the expectations of local stakeholders in host countries, in order to gain local legitimacy and meet the requirements of the partner company and international stakeholders to continue working [13]. In companies with global websites, CSR communication is over express and, according to another study [40], the practical reason is the need to summarise CSR activities of entire MNCs by including local activities. Furthermore, the number of topics include in MNCs' CSR practices takes into account every aspect discussed on global websites [19,40].

2.4. Corporate social responsibility in the chocolate chain market

The chocolate industry occupies an important place on the CSR agenda, as it has a long supply chain, from cocoa beans to retail shops [47]. Chocolate brands not only provide services and create value for customers, but are also an important operator with both environmental and social effects in the producing countries [14,48] (Table 1).

Sustainable certifications, in term of green marketing, are a challenge for the chocolate industry [18] and are provided by an independent authority of written assurance (a certificate) that the product, service or system in question meets specific requirements [49]. We mention among all the most popular sustainability cocoa certifications: Fair Trade, Rainforest Alliance, Carbon Footprint, Universal Trade Zone (UTZ); certifications refer to issues included in Table 1 and are useful to consumers to choices chocolate products that present some differentiation in term of sustainability [50]. Additionally, this kind of certification could be oriented to investors, retailers, NGO's that are may be targeted in CSR communications.

In order to gain a significant advantage and create value, many certifications are grown in the sector over the past 20 years: the most relevant are World Cocoa Foundation (WCF), the International Cocoa Initiative (ICI), International Social and Environmental Accreditation and Labelling Alliance (ISEAL Alliance) and Fairtrade Certifications. Nevertheless, in practice the implementation of sound corporate social responsibility (CSR) strategies has proven to be very complicated [18].

3. Methodology

3.1. Sampling criterion

A cross-sectional website content analysis of the websites of chocolate companies worldwide was conducted, modelled on the method used by [14]. The sample selection took place in September 2022 following the ranking of largest chocolate and cocoa producers in 2021 with net sale over then 3 USD billion, published by ICCO and statista.com (https

://www.statista.com/statistics/1298191/top-chocolate-manufacturers -worldwide/). The list of companies and their variables are summarized in Table 2.

We applied an Internet search using the Google search engine following 2 rules:

Rule 1: We performed an incognito browsing in order to remove possible interference based on the identification of the author's location or other information.

Rule 2: Since the companies were multinational, we collected the "global" URL (e.g. https://mars.com/global) and not geographically specific websites (e.g. https://ita.mars.com/it), because we did not want to collect information targeted at a specific country of distribution.

We collected only CSR-relevant information from the companies' websites on a specific webpage or on multiple webpages on December 2022. We transcribed them into Word documents and each word document each document corresponded to a company. The selection was done considering superior code previously defined. The number of words analyse was equal to 43,071. All reports were excluded by the sampling because it is uncommon for consumers to download the Portable Document Format (PDF) file and read such specific and technical information, as is usually given in reports and oriented to practitioners. In addition, the number of countries where products are sold, the presence or absence of CSR reports and the city of headquarters were collected. Not all information was available for all companies' websites, however, the names of the sampled companies and their characteristic variables are summarised in Table 2.

3.2. Data analysis

Content analysis is conducted through the logic of quantitative and qualitative study, and is characterised as a type of textual analysis studying the messages of a text in order to interpret its meaning [21]. Content analysis allows researchers to summarise a large amount of textual information into a small number of content categories [24] based on explicit coding rules [51]. This method was used to analyse words, word clusters and the whole document, identifying similarities between the companies' websites and showing, if present, similarities or differences in CSR communication. Variables were involved to categorise the companies and make this study comprehensive.

In the processing phase, all CSR categories were coded, according to four main categories: Environment, Fair Trade, Human Resources and Community. These "Superior Code" were further divided into Sub-codes according to [14], which showed a strong correlation between the history of chocolate and that of coffee, as they share the same characteristics such as crops, commodities, preparation work before consumption (roasting, pressing, grinding etc.) and consumer products. The marketing strategies adopted by the chocolate and coffee industries also reflect a similar pattern in the way they develops in terms of production process and consumption away from the origins of the products [16]. Additionally, the impact on biodiversity caused by cocoa and coffee is similar and involve in the same system and actors [52]. For these reasons, the authors used the code proposed by [14]; however, some codes were modified based on some difference to accommodate all topics in their

sample. Table 3 shows the code used in the current study. Codebook formed a one-dimensional scale with high internal consistency (Cronbach's $\alpha=0.91$) performed by MAXQDA.

The frequency of the items identified by the coding of each marketing message about CSR activity was calculated in MAXQDA software and translated into a Relationship Map to determine how each Superior code (Environment of green colour, Human Resources in violet colour, Community in orange colour and Fair trade in aqua green) interacts with the Sub-code of the same colour of Superior code in a visual representation [53]. This analysis was performed using IBM SPSS Statistic software 28.0 for Windows. The dimension of the node (of both categories and items) constitutes the number of times the code was found in the websites. The strength of the links between the nodes is given by the frequency of occurrence of the items into all websites; additionally, the thickness of the link lines suggests the extent of the connection, which can be weak, normal, or strong [53].

In order to describe the association between chocolate companies and identified CSR categories, a Correspondence Analysis (CA) was conducted. This statistical method was useful to identify associations between category variables (Environment, Human resources, Community, Fair trade) and companies in a graphical dimension. This technique first tests the association between the variables using a chi-square test and then allows for correspondence by considering at the same time Subcode variables graphically in one dimension [54,55]. In this way, an area structured by chi-square distance can be found in the same geometric space: the proximity or distance between points associated with different variable categories indicates the level of association or detachment of the variables [8]. According to [56] each dimension was only accepted when a singular value above 0.20 was obtained.

To identify the existence of similar communication patterns between companies, the individual enterprise was studied according to the Superior codes in MAXQDA. Each company is represented as a portrait of the code sequence based on the order and colours of the codes. In other words, in the company's portrait, the colour attributes of the Superior codes associated are represented graphically in a matrix with 1200 little squares (arranged in 30 rows, each with 40 squares). Unlike other representations, company portrait takes the size of the segments into account and "weights" the colour according to segment size [57]. These portraits generally illustrate the prevalence and sequence of items [58] and, at the end, we have 9 visual profile of companies that are useful for comparing CSR communication topics.

4. Results

The results described in Fig. 1 answer the first research question and show the Relationship Maps (RM) between the CSR communication categories of chocolate companies. This map represents the connection through the nodes registered in each website: categories are represented by the Superior code and items by the Sub-code.

The analysis was performed on the basis of four Superior codes: Human Resources, Community, Environment and Fair Trade, identified during the previous literature review. The RM shows that the most common pattern in CSR communication is the following order:

Table 2Sample companies' websites and their characteristics variables sorted by net of sales.

Company	Net of sales (USD billion)	N. Brands	N. Brands Chocolate	N. of countries where products are sold	Reports	Headquarters
Mars Wrigley	18	97	18	More than 80	yes	USA
Ferrero group	13	4	4	170	yes	Italy
Mondelez international	11.8	36	10	More then 150	yes	USA
Meiji Co ltd	9.5	19	9	N/A	no	China
Hershey Co	8	Almost 29	N/A	N/A	yes	USA
Nestle	7.9	200	14	186	yes	Switzerland
Lindt	4.6	5	5	N/A	yes	Switzerland
Pladis	4.5	8	5	More then 120	no	UK
Glico	3.2	1	1	N/A	yes	Japan

Table 3Superior codes and Sub-codes used to categorise the text.

Colour	Superior code	Sub-code
•	COMMUNITY	Collaboration and partnerships
•	COMMUNITY	Diet & nutritional program
•	COMMUNITY	Supporting women
•	COMMUNITY	Supporting community & culture
•	COMMUNITY	Education
•	COMMUNITY	children nutrition
•	COMMUNITY	Supporting sports
•	COMMUNITY	Charity
•	ENVIRONMENT	Water resources
•	ENVIRONMENT	Climate change
•	ENVIRONMENT	Forest & emissions
•	ENVIRONMENT	Recycling and waste
•	ENVIRONMENT	Energy Saving
•	ENVIRONMENT	Chemical usage
•	FAIR TRADE	Respect of human right
•	FAIR TRADE	Supporting farmers
•	FAIR TRADE	Anti-child labour
•	FAIR TRADE	Fair trade
•	FAIR TRADE	Human trafficking
•	HUMAN RESOURCES	Employee care
•	HUMAN RESOURCES	Training
•	HUMAN RESOURCES	Diversity & Inclusion

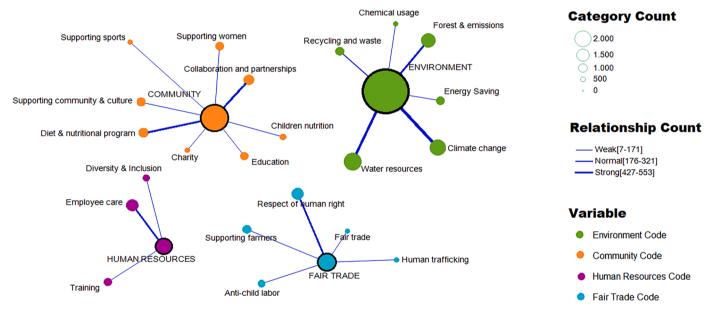


Fig. 1. Relationship map between Superior code (CSR category) and Sub-codes (items expressing CRS value).

Environment, Community, Fair Trade and Human Resources. Going into more detail, the most common items are "Water resources" (553 occurrences) followed by "Climate change" (n.504), "Forest & emissions" (n.427), "Respect of human right" (n.321) and "Employee care" (n.320). These first five items belong in order to Environment, Fair Trade and Human resources. Additionally, the last five items are "Supporting sport" (n.26 from Community), "Charity" (n.8 from Community), "Chemical usage" (n.7 from Environment), "Fair Trade" (n.7 from Fair Trade), and the last one is "Human trafficking" (n.7 from Fair Trade).

The results of the CA between Superior code of CSR and the 9 chocolate companies are presented in Fig. 2, while the values, the inertia, the proportion explained and the cumulative proportion by each estimated dimension of the CA are reportend in Table 4. In this case, a two-dimensional solution can be accepted because for singular value greater than 0.20. In particular, the dimension 2 shows the largest

relative contributor to the total variance (94.2 %) of the axis.

As can be seen in Fig. 2, there is a bounded area in which most companies and most of Superior codes are concentrated. However, some companies as Pladis and, overall Glico, are completely distant from the other companies and categories, which means that the link is weak because CSR elements are not included in the company's website. The Fair Trade code is also rather distant from the other dimensions. Addictionally, inside the area in which all variable are aggregated, there are some that are more related to the Evironment, such as Mars and Nestlé, others that are close to the Community, such as Meiji and Ferrero and Hershey that is very close to Human Resources.

The following figure (Fig. 3) illustrates an interesting visual model of the CSR communication of each multinational chocolate company and serves to answer the third research questions, concerning the presence of patterns of communication adopted by companies.

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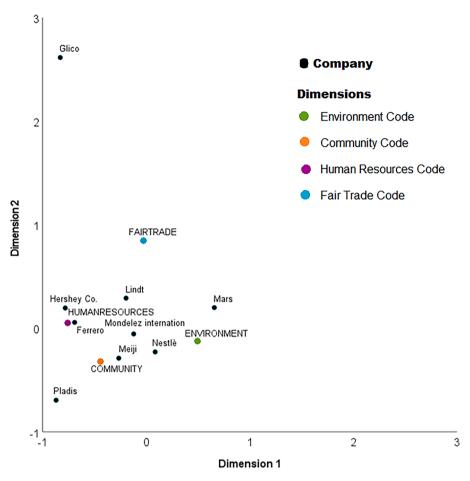


Fig. 2. Illustration of the Correspondence analysis with 2 dimensions.

Table 4

Correspondance analysis of companies and superior CSR code. The chi-square of independence between the two variables (columns and rows) and the p-value are also reported.

Dimension	Singular Value	Inertia	Proportion of Inerti	Proportion of Inertia		Sig.
			Accounted	Cumulative		
1	0.239	0.057	0.694	0.694		
2	0.143	0.021	0.249	0.942		
3	0.069	0.005	0.058	0.000		
Total		0.082	1000	1000	334.345	***

The p-value refers to the statistical significance level: ***<0.001, **<0.01, *<0.05, no value when not significant.

The analysis of the numerical distribution of the categories, highlights the presence of a certain similarity between the communication of Ferrero, Lindt, Meiji and Hershey Co. In fact, it can be seen that the layout is balanced among the categories. In contrast, Pladis, Mars, Nestlé, Mondelez International and Glico present a polarised layout toward one single category and minimising some others. Otherwise, Fig. 3 can be described according to the first CSR category adopted by the companies: Lindt, Mondelez International, Nestlé, Mars and Meiji communicate more about the value of the Environment that they intend to pursue or already follow; Pladis, Hershey Co. and Ferrero focus their communication on supporting the community, including childhood; Glico follows Fair Trade communication as the first category and, finally, no company communicates Human Resources as the first corporate value.

5. Discussion

This article aimed to contribute to the understanding CSR categorial

interaction of big chocolate companies worldwide, by examining the information content included within their websites. In particular, by leveraging the literature on agribusiness CSR and general CSR communication strategies, the study sought to define the relationship between different category of CSR and items communicate by multinational chocolate companies. Considering the growing role of sustainability for all business sectors, the study shows that most of the top companies in this highly competitive and global industry use CSR activities and practices to create differentiation and position themselves in the market and communicate with all stakeholders. This first general result confirms that chocolate companies use communication strategies focused on differentiation and the creation of process and/or product values based on sustainability [59]. In fact, as already studied by other authors, food companies cannot neglect communication initiatives based on their CSR activities. Instead, they should valorize them, generating interest among stakeholders, initiating their branding process, depend and fostering customer loyalty [23,60]. This perspective, on the other hand, must also be followed by chocolate companies, especially multinationals A. Sparacino et al. Sustainable Futures 7 (2024) 100151

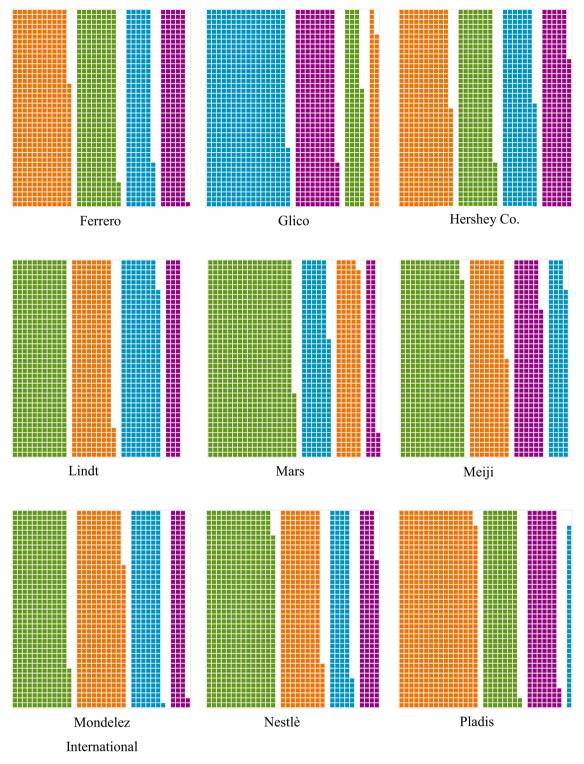


Fig. 3. Visual model representation of CSR content categories (Legend: = Community. = Environment. = Fair Trade. = Human Resources) for each chocolate company given by document portrait.

[61,62]. This study does not claim to know the effects that the content has on stakeholders, nor does it aim to demonstrate the absence or presence of greenwashing phenomena. Instead, its objective is to understand the content and the items that characterize it.

According to the results, in response to the first research question, the largest chocolate companies clearly focus on environmental sustainability. This finding does not mean that a company that communicates its value on environmental practices is not involved in social or

economic sustainability initiatives, but the results show that the main communication focuses on the health of the planet. Rather, this research indicates that some companies communicate about the environment more frequently than about the community, fair trade or human resources. Companies emphasise the importance of saving water as a resource, the major problem of climate change, the goal of reducing emissions and preserving forests. The importance of ecological issues in the chocolate industry is confirmed by [6] as deforestation, the

difficulties caused by climatic conditions in agriculture, in terms of water scarcity, are the main environmental problem. The latter statement is more emphasised in the particular case of supply chains where food production and consumption take place on different continents. In particular, in the case of cocoa, the production of which takes place in developing countries in the tropical areas, but the consumption of which is concentrated in higher income countries, consumers manifest an even more pronounced interest [63].

Companies' communications on environmental practices become decisive for the creation of a good and sustainable brand image. Parallel to the importance of brand image, according to [64], interest in ecological issues is growing among stakeholders; companies know that giving a message about their commitment to the environment helps to improve the image of multinationals [65] and improve CSR program with activities aimed at protecting the environment can be functional not only to take the responsibility of cultivation of cocoa but also to improve company reputation. Moreover, multinationals' awareness of their impact on climate and environment goes back several decades [66], while their care and attention towards the community is rather recent [67].

Although the study conducted by [68] shows that the development of virtuous themes through the self-representation of ethical values, such as Fair Trade is an important process by which a multinational company guarantee right price to producers and workers and could represent a desirable brand image. The global business considered in this study do not seem to spend much effort to enhance their ethical principles in the CSR context. The gap between the findings of previous researches and the results obtained from our study can be attributed to two factors: (1) it is difficult for organisations operating internationally to address country differences in the ethical concepts of right or wrong [68]; (2) it is more common to find ethical value as a basis for designing vision and mission [69] and not in webpage related to promoting CSR.

The relationships between the main CSR categories and companies (second research question) are demonstrated in the result of Correspondence Analysis and agree with the depicted communication website modelling profile of chocolate business (third research question). Companies like Glico had a weaker association with all CSR topics; in fact, according to [70], product destination country and national culture [71], in this case mainly Asia [72], can change the content of CSR activity: environmental issues and community support are worse in Asia than in the US or Europe [63]. For other companies, CSR communication on website have been different: some have used community issues to communicate their sustainable value, others have used fair trade issues. The short distance between Human Resources with Ferrero and Hershey, Environment with Mars and Nestlé, and Community with Pladis and Meiji underlines the different approaches of each company to CSR communication activities. As confirmed by [73], considering that sustainability communication is an instrument to build an efficient business, companies choose several main topics to improve reputation and attract capital. Other companies, such as Modelized International and Lindt are equidistant from Environment, Community and Human Resources and the result of the CSR communication profile thought document portrait confirms that their CSR marketing strategies have similar characteristics in terms of distribution content categories. As corroborated by [74], the longevity of these global and extensive companies, with a large number of brands operating in different market sectors, prompt them to develop efficient CSR programs with effect in the sustainable marketing strategies based on the description of social initiatives, narratives of ethical principles and achievements, also based on collaborations with different organisations.

Despite environmental topics characterize most of the CSR program and communications some companies have oriented their CSR communication in a different direction emphasising ethical topics. [74]. The profiles of CSR communication program suggest some differences among companies with regard to ethical and social aspects. For example, the guidelines information on children's diet and nutrition conducted by

some companies like Ferrero toward conscious consumption, fits perfectly with the characteristics of the product lines dedicated to children, which are rich in sugar (e.g. white or milk chocolate) that could be unhealthy for human organism and promote weight gain [75]. For this reason, to demonstrate their commitment to the social issues of overweight, which are particularly present in some countries, they introduce programmes supporting good nutrition in their CSR communication. Other companies, without a specific target group of consumers, use the CSR communication strategy considering each category.

6. Conclusions

The awareness of society about climate change, community and ethical issues, and the economic difficulties that have grown over the last decades have led industries to support activities in production areas, reducing their environmental impact and respecting workers' rights. In parallel, the CSR communication strategies of all these applications by companies become a core value to be increasingly sustainable and leave a footprint in the world in term of respect of workers right, environment and community. CSR communication program have effect on reputation of the brand in order to differentiate themselves and offer a creative way to engage people and promote them imagine.

This research highlighted the important role and heterogeneity of communication program of CSR on business website among the world's top chocolate companies. The results on the CSR topic and elements used by the companies to communicate their sustainable value, environment, community, human resource and fair trade, can be a good starting point to understand the evolution of Corporate Social Responsibility strategies, with a view of improving the content. For instance, the selected companies do not communicate their value on human resources, this result could help existing companies to improve their activities and communication on this important CSR, with effect on their image in the market and reach stakeholders' needs. The identification of different profiles of CSR communication strategies by companies, especially in agri-food sector is, innovative in the literature. The communication strategies differ one another, with a similar pattern profile: some companies present CSR communication polarized towards the theme of environment or fair-trade and ethical value. In other cases, the main theme was sustainable community, with the promotion of projects aimed at society, while other present a balanced communication across the various categories. These results seem to express a link between Corporate Social Responsibility choices and forms of market positioning, highlighting an increasingly strong link between sustainability and corporate choices. At the same time, environmental initiatives have a significant and transversal spread in sustainable communication.

This study has several practical implications. Firstly, considering the adoption of sustainability strategies in supply chains, the results show that multinational chocolate companies present CSR policy communication with different strategies with consequence to creation of value and market position. Secondly, companies could emphasize differentiation opportunity, especially with regard to human resources and fair trade, creating competitive advantages. Indeed, the combination of business with ethical values, social project and community initiatives for children and employees could create a positive perception of the company by customers.

This study has limitations related to the methodology employed. The application of content analysis may have overlooked some content not included in the codebook. Moreover, this work aims to understand the expressed content but not the accuracy of this information, not precluding the possibility of greenwashing.

Future studies could be based on the exploration of positioning based on sustainable communication strategies and how customers perceive them. Additionally, they should integrate accessible data sources from other marketing communication channels, such as social media. Here, researchers can combine sustainable communication messages from multiple channels and investigate possible ways to create

differentiation.

CRediT authorship contribution statement

Antonina Sparacino: Formal analysis, Software, Writing – original draft, Writing – review & editing. Valentina Maria Merlino: Data curation, Formal analysis, Methodology, Supervision, Visualization, Writing – review & editing. Filippo Brun: Visualization, Writing – review & editing. Danielle Borra: Visualization, Writing – review & editing. Simone Blanc: Conceptualization, Supervision, Validation, Writing – review & editing. Stefano Massaglia: Conceptualization, Project administration, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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