Digital Content Analysis of Corporate Social Response to Turkey and Syria Earthquakes

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This research analyses the content generated in social media platforms and websites by local businesses and non-governmental organizations (NGOs) in Middle Eastern Arab countries which took action to mitigate the devastating consequences of the earthquakes that struck Turkey and Syria early 2023. Based on a qualitative approach, the analysis conducted shed light on the significant social response generated by local businesses and NGOs in the aftermath of the earthquakes in 12 countries. Social media platforms, especially Facebook and Twitter, played a crucial role in mobilizing support from communities. Results show that the donations received encompassed a wide range of supplies and services, and included economic, environmental and social implications to the planning and development for reconstruction.

Keywords: corporate social responsibility, social marketing, social media, social responsibility

Introduction and Objective

Social media have taken off strongly in recent years, and the Arab Spring in 2011, among others, has also fueled researchers' interest in acknowledging how social media could well affect civic participation (Boulianne 2015). According to Murár (2011), social media is "a set of Internet applications developed on the technological and ideological foundations of Web 2.0 that enable the user to create and exchange content". Social media platforms, which are very popular among users, are frequently analyzing and visualizing current issues (Drahošová and Balco 2017). Social media platforms play an important role in sharing information by enabling people and organizations to quickly distribute news and updates (Zubiaga 2019), as well as the ability to communicate with others, gaining new knowledge, keeping up to date on world events and quickly accessing information (Lenhart et al. 2019). Social media also serve as a platform for activists to organize, share information, coordinate events, and raise public awareness regarding political and social concerns (Castells 2015). Lewandowsky et al. (2017), on the other hand, point to the rapid spread of disinformation via social media platforms, which leads to public mistrust and confusion of traditional news sources (Starbird 2017).

According to the 2021 Social Media Marketing Industry Report (Social Media Examiner 2021), 94% of marketers use Facebook for business, while 71% of businesses use Twitter. Most businesses are currently also focusing on corporate social responsibility (CSR) activities, including human rights and community well-being (De Grosbois 2016; Ghaderi et al. 2019). Concurrently, CSR has emerged as a critical component for NGOs in order to achieve their social and environmental goals while making a significant difference in the communities they serve (Gautam and Singh 2020). In this context, social media have grown in importance for CSR communication (Elalfy et al. 2020), since they offer dynamic and far-reaching possibilities for CSR engagement due to their exceptional capabilities, such as persistence,

association, visibility, and editability (Treem and Leonardi 2013), and they also facilitate direct stakeholders' responses (Gomez-Carrasco et al. 2019) and contribute to raising public awareness on CSR issues (Lee et al. 2013).

While social responsibility and CSR are both ethical frameworks, social responsibility is to be taken as a broader concept, encompassing individuals and social entities, as a whole (organizations, corporations, etc.), and their commitment to benefit the environments they belong to and the society at large (Upen 2019). Thus, interest in social responsibility extends beyond the business sector because social responsibility encompasses all the actions and behaviors of organizations involved with the community that are consistent with their objectives and values (Bowes et al. 2001). Social responsibility, for example, is often but not always used in the business sector to refer to voluntary activities which are the core and focus of NGOs (Păceșilă and Colesca 2020); NGOs are concerned with maintaining social balance, for instance by assisting those in need or rescuing community members in a disaster response (Societal 2012). When a disaster strikes a nation or community, NGOs frequently step in to meet needs and provide resources that work to reduce the risk of a crisis and assist survivors in rebuilding their lives (Alexander 2006), while private businesses stand out for their critical role in disaster relief by providing funds, essential supplies, and volunteers to areas experiencing tragedy (Zhao et al. 2015).

During natural disasters that impact various sectors of the economy, social responsibility holds exceptional significance and value for society (He et al. 2022). Experiences show that in disaster situations, organizations can respond quickly and identify the relief needs of those in need (Balesteros et al. 2017). Izumi and Shaw (2015) highlight several avenues through which the private sector can aid in mitigat-

ing disasters such as providing direct assistance to affected communities, fostering the creation of innovative products, and forging partnerships among businesses, NGOs, governments, and international organizations. According to Hotho and Girschik (2019), the primary areas of focus for providing assistance during disasters which revolve around social and economic aspects include ensuring access to shelter, healthcare, nutrition, logistical services, water, hygiene, sanitation, communications, cash transfers, as well as providing administrative support and consultancy on operational matters. Whereas Hinzpeter and Sandholz (2018) observe that approaches based on nature and the environment are marginalized in post-disaster situations in favor of economic and social motivations. In contrast, Takeuchi et al. (2014) and Tidball (2014) contend that the reconstruction of natural environments following disasters can serve as a symbolic representation of recovery and enhance societies' capabilities to exert control, take action, and respond to future events more effectively.

This research aims to discuss the responses to the disaster provoked by the earthquakes that struck southern Turkey and northern Syria on February 6, 2023 killing more than 50, 000 people and destroying or damaging over 214,000 buildings, including hospitals and schools, while 18 million people have been affected, with the majority of them requiring medical aid, food, and shelter (Disasters Emergency Committee 2023). Since the likelihood of finding more people alive decreased dramatically two weeks after the disaster, the focus gradually shifted to providing basic support to survivors who were left homeless and lost their possessions, livelihoods, and loved ones in the harsh winter conditions (British Red Cross 2023). In crisis communication research, the use of social media for monitoring the events in real-time has grown significantly (Eriksson

2018), and social media have become important platforms for organizations to use when dealing with crises and communicating with key audiences (Jin et al. 2014). Therefore, the purpose of this research is to shed light on the post-disaster social responsibility activities of both local businesses and NGOs that came to lend a helping hand and support those affected by the earthquakes in Turkey and Syria, by analyzing the content of social media platforms and websites of some Middle Eastern local institutions participating in the relief effort, to learn more about the nature of social responsibility adopted by the participants, given that scholars have paid a rather limited attention to social media listening and monitoring within the context of crisis communication and management (Macnamara 2016, Macnamara 2018).

Theoretical Context

In order to mitigate the negative effects of natural disasters, it is becoming increasingly important to manage communications and extract information through them (Ray and Bala 2020), where digital media is used to raise public awareness of pressing social issues (Miladi and Mellor 2020); social media also play an important role as they facilitate real-time opinion sharing and communication between different parties involved, that might not be possible through other formal channels (Simon et al. 2015). Additionally, social media facilitate faster recovery from major disasters and increase community resilience through knowledge exchange and improved communication within and between communities (Dozier et al. 2019). Hughes and Tapia (2015) conducted research to examine the impact of social media on the coordination between professional emergency responders and digital volunteers, and they identified several key areas for improving collaboration between these two groups, including using digital volunteer data as contextual information and exploring algo-

rithmic solutions, as the field evolves and collaboration between professional responders and digital volunteers grows, professional responders' reliance on data and products generated by digital volunteers will increase significantly.

Flora and Boyd (2016) carried out a study with data derived from the 2015 Edelman Trust Barometer® across the United States, Germany, and China. They aimed to explore media preference's impact on CSR perception, examine how CSR contributes to trust building and its influence on public engagement with a business, and test if media preference moderates the CSR-trust relationship. While results reveal China's highest business trust and Germany's lowest, no consistent media patterns linking to positive CSR evaluation were found across the three countries. CSR dimensions (social, economic, environmental) all affected the prediction of the business trust in these markets. In the United States and Germany, there was a positive correlation between business trust and engagement with trusted companies.

Also, Chen and Cheng (2023) investigated the role of social media influencers (SMI) endorsing CSR initiatives and how they affected the support to these initiatives among the corporation's key social media audience, the consumers. Based on a survey conducted across the United States, the results showed that SMIs who did not typically focus on CSR could encourage consumers to support endorsed CSR initiatives, particularly when these consumers viewed the SMIs as opinion leaders. These findings offer insights into selecting effective SMIs from non-CSR domains to encourage consumer support to CSR initiatives.

In a study conducted by Cheng et al. (2019) on the public's response to CSR activities through mobile devices, in the context of natural disasters, the authors found that technological convenience, social interaction, entertainment, and

information exchange available through mobile devices had an impact on satisfaction, commitment, trust, and control. This relationship, was, in turn, associated to the engagement with social media communication on mobile devices, thus proving the critical role of social media in involving the public in CSR issues via mobile devices during natural disasters.

Chu et al. (2020) conducted a study on cultural differences between Chinese and American consumers, emerging from their interaction with CSR communications on social media. The authors explored attitudes towards CSR on social media, peer interaction about CSR activities, and opinion leadership characteristics, by surveying a sample of social media users in both countries; findings have shown that both the interaction of consumers and the characteristics of peer communication, as well as opinion leadership in CSR communications on social media, had a greater impact on the Chinese participants.

Colleoni (2013) carried out a study on CSR communication strategies for organizational legitimacy in social media, intending to determine the most effective corporate communication strategy used on social media to create a convergence between the corporate CSR agenda and the social expectations of stakeholders, thereby increasing the businesses' legitimacy. The results showed that neither the engaging strategy nor the information shared led directly to harmonization, indicating that social media communication is still viewed to be merely a marketing practice for most businesses. Zhang et al. (2021) investigated the impact of CSR communication via social media on customer loyalty in times of crisis, finding that CSR communication via social media increases customer loyalty through the mediating effect of electronic word of mouth in times of crisis.

Also, Skouloudis et al. (2015) show that by examining the perceptions and priorities of CSR from the perspective of

NGOs, there is a high appreciation of NGOs for the contribution of business entities to occupational health and safety, as well as to the protection of human rights, good environmental management, and other social practices. According to Sylvain (2014), partnerships between NGOs and businesses in the pursuit of CSR have become more common in recent years, this in turn indicating the existence of harmony and convergence in social responsibility targets between businesses and NGOs.

In particular, Muneo Kaigo (2012) studied the use of Twitter during the March 2011 Great East Japan earthquake in Tsukuba city. Despite minimal physical damage, Tsukuba lost electricity and water supplies. Telephone and internet communication, as well as web-enabled phones, were discontinued, and smartphones became the primary device for communication via voice assistants' calls, SMS, email, and social media. Facebook and Twitter emerged as vital for information dissemination. Tsukuba's authorities employed Twitter to interact with citizens' post-earthquake, aiding information spread and building social capital. Despite disrupted city services, social media rapidly conveyed information to the public and disaster agencies.

Dufty et al. (2016) also investigated the primary functions of Twitter in emergency management over the past decade. The predominant role of Twitter in emergency management revolves around its function as an auxiliary communication channel. It serves purposes such as crisis mapping for obtaining feedback, comprehending the sentiments of affected people, and facilitating real-time information exchange between the community and emergency management entities.

Methodology

The researchers conducted a comprehensive investigation into the various social responsibility initiatives undertaken by local businesses and NGOs using a qualitative research approach based on social media

TABLE 1
Profile of participants (own source)

Countries	Businesses			NGOs	
	Name	Industry	Electronic platform	Name	Electronic platform
1. Jordan	Housing Bank	Finance	Twitter	JHCO	Facebook and website
2. Saudi Arabia	Al Rajhi Bank	Finance	Twitter	King Salman Humanitarian Aid & Relief Centre	Twitter and website
3. United Arab Emirates	Al Ansari Exchange	Finance	Twitter and website	Khalifa Bin Zayed Al Nahyan Foundation	Facebook and website
4. Qatar	Qatar Stars League	Sport	Twitter and website	Qatar Charity	Twitter and website
5. Kuwait	The National Bank of Kuwait	Finance	Twitter and website	Alsafa Humanity	Twitter and website
6. Oman	ONIEC	Engineering	Facebook and Twitter	Oman Charitable Organization	Twitter and website
7. Bahrain	National Hotels Company	Hospitality	Facebook	Bahrain Philanthropic Society	Facebook and website
8. Iraq	Samarra Pharmaceutical Company	Pharmaceutical	Facebook	Imam Hussain Holy Shrine	website
9. Lebanon	Yunus Emre Institute - Beirut	Instructional	Facebook and Twitter	The Awareness and Consolation Association	Facebook
10. Yemen	Sabafon	Telecommunication	Twitter	Tawakkol Karman Foundation	Facebook and Twitter
11. Syria	National Transportation Company	Transportation	Facebook	Syria Trust for Development	Facebook
12. Palestine	SUPER TEX Company	Clothing	Facebook	Merciful Association	Facebook

tance to individuals affected by earthquakes in Turkey and Syria. This analysis extended to encompass the geographical scope of the Middle Eastern Arab countries, comprising a total of 12 nations as documented by INSEE (2020), and outlined in Table 1, where Brammer and Millington (2004) point out that corporate philanthropy is rarely studied both at international and regional levels.

Data Collection

Based on the data provided in Table 1, a selection process was undertaken to identify representative participants from each of the countries under consideration. This process ensured the inclusion of one local business entity and one NGO from each country, resulting in a balanced representation. The criteria for this selection were derived from specific keywords such as Earthquake, Donations and Support, in Syria and Turkey, specifically using the Arabic language. These keywords were employed to search for instances where these businesses and NGOs had engaged in contributions or support related to earthquakes.

conversations. In pursuit of this objective, a methodological framework was formulated to gather primary qualitative data through the process of content analysis. This approach was selected due to its appropriateness as an effective technique for processing textual data (Kleinheksel et al. 2020). Social media crisis monitoring can be described as the continuous and systematic searches of social media platforms to gather real-time information about news or live events (Hadi and Fleshler, 2016).

The focal point of the research involved the analysis of content derived from social media platforms and websites associated with a select group of local businesses and NGOs. These entities were recognized for their commendable efforts in contributing to social and humanitarian causes, particularly in the context of providing support and assis-

The selection process further encompassed identifying mentions of the name of the concerned country within the textual content posted on social media platforms, notably Facebook and Twitter. These platforms were chosen due to their widespread use and their tendency to host textual expressions that can be effectively subjected to qualitative analysis. By focusing on written expressions, the researchers aimed to extract meaningful insights and patterns from the textual content generated by the

selected businesses and NGOs. This approach yielded a total sample size of 24 participants, equally divided between businesses and NGOs. The equitable distribution of participants aimed to ensure a balanced representation of both types of entities, fostering the exploration of the distinctive perspectives, strategies, and approaches employed by each category in the context of earthquake-related contributions.

Overall, the selection process not only upheld the representativeness of the sample but also ensured that the chosen participants were actively engaged in discussions related to earthquake donations. This approach served to enhance the reliability and relevance of the collected data, enabling the researchers to draw robust conclusions about the social responsibility activities and philanthropic efforts of local businesses and NGOs within the scope of the study. As stated by Miladi et al. (2022), the communication channels Facebook and Twitter stand out as widely used platforms for virtual interactions among individuals and groups across various global regions. The Arab Social Media Report (2017) revealed that Facebook is the dominant social media platform in the Arab world, with approximately 156 million users, while Twitter follows as the second most popular platform with 11.1 million users. Interestingly, Arabic has recently become the language of choice for the majority of Arab world social media users, accounting for 55%, followed by English. As a result, this trend has significant implications for how businesses and organizations interact with each other and with society. The financial sector accounted for the greatest proportion of the sample studied, as per Rebai et al. (2016), the financial sector is increasingly interested in CSR issues, and also, according to Zhang et al. (2010), businesses with significant public contact, such as retailers and banks, typically donate more than businesses with lim-

ited levels of public exposure. Likewise, social media platforms outperformed the websites of the institutions studied as a means of announcing social responsibility practices, since social media platforms are heavily used by institutions to manage their social responsibility activities (Jeong et al. 2013). Whereas Facebook is the most popular social media platform used by businesses and NGOs to disclose their social responsibility practices, according to Abitbol and Lee (2017), the Facebook platform can also offer businesses unique opportunities to engage the stakeholders in CSR actions.

Data Analysis

After the sample selection process, data collection commenced by delving into the textual content. This was achieved through an examination of the social responsibility activities that had been announced on the participants' respective social media platforms, as Schreier (2012) indicates that qualitative content analysis is appropriate for a wide range of data, including websites. To further dissect the qualitative data, a process of identifying themes within distinct categories was undertaken. This analytical method draws from the insights of Marks and Yardley (2004), who emphasize that thematic analysis offers a holistic comprehension of various subjects by discerning underlying patterns while connecting various ideas and opinions and comparing them to data gathered in various situations at various times (Alhojailan and Ibrahim 2012). As a result, the subsequent section unveils a summary of the main findings that have been gleaned from the gathered data, which is expanded in the discussion section in conversation with previous literature.

Results and discussion

This section presents the raw data collection results as well as a description of the

research findings, which demonstrate the contributions of local businesses and NGOs in the field of social responsibility to assisting in the recovery of earthquakes in Turkey and Syria through digital content analysis. This section also delves into a critical analysis of the results, shedding light on the contributions made by the Middle Eastern Arab countries' local businesses and NGOs to social responsibility, particularly in the context of aiding earthquake recovery efforts in Turkey and Syria.

First, results show that the social role of businesses and NGOs encompasses a wide range of contributions, with a significant portion being expressed through various forms of donations. These contributions have taken the form of medical equipment and supplies, personal care items, hygiene tools, shelters, energy-related equipment, and essential sustenance in the form of food and beverages. It is also important to note that social contributions extended beyond mere material donations; they also encompassed a diverse array of voluntary activities and initiatives aimed at uplifting communities. Second, the economic role was strongly present through cash support by businesses and NGOs analyzed, where financial donations were tracked directly as cash and through campaigns organized by the majority of NGOs to collect donations from individuals. Furthermore, most businesses in the financial sector enabled accounts and platforms for cash donations.

In terms of the environmental issues, the contribution was made by sponsoring some energy corporations to equip some new buildings with alternative energy sources, by providing assistance for evaluating buildings damaged because of earthquake exposure, by planting trees, greening damaged areas, by providing pet care services and by sending veterinarians and veterinary first aid, as well as fire and rescue tools.

When a disaster strikes a community, NGOs frequently step in to provide funds and other assistance to survivors in rebuilding their lives (Alexander 2006), as do businesses as major players in emergency relief (Johnson et al. 2011). In order to reduce the negative impacts of disasters, economic, social, and environmental factors must be considered (Desi-Nezhad et al. 2022). Therefore, implementing CSR practices helps to manage and mitigate crises (Alsheyab et al. 2023). In this section, we will discuss the social responsibility activities undertaken by businesses and NGOs in Middle Eastern Arab countries as a response to those affected by the earthquakes that struck Turkey and Syria, which were achieved by content analysis of websites and social media platforms for some businesses and NGOs, since many scholars (for example, Austin et al. 2012; Fearn-Banks 2016; Coombs 2019) have emphasized the importance of social media in allowing organizations to interact with the public in order to manage crises.

The Social Role of Businesses and NGOs

In times of crisis and natural disasters, CSR is particularly significant and valuable to society (He et al. 2022). Furthermore, through their social commitments, NGOs play an important role in providing humanitarian assistance (Pierre-Louis 2011). Hence, in response to the earthquake, businesses and NGOs undertook a range of social and humanitarian initiatives. The outpouring of support was primarily manifested through donations. The notable activities can be categorized as follows:

Medical assistance: the response encompassed an array of medical equipment and supplies, mainly vital essentials such as medicines, medical devices, and wheelchairs. Additionally, an assortment of medical provisions including adhesive tapes, bandages, tissue paper, thermometers, cotton, gauze, disinfectants, scissors, sterilizers, saline solutions, syringes, gloves, masks, and even feeding bottles, illustrating

a comprehensive approach to healthcare provisioning.

Personal care and hygiene: ensuring personal hygiene remained intact during the crisis, businesses and NGOs supplied personal care items. This encompassed soap, shower gel, shampoo, loofahs, towels, toothbrushes, toothpaste, nail scissors, ear cleaning sticks, deodorants, scented tissues, shaving tools, and hand sanitizers. Basic first necessity goods like toilet paper, diapers, combs, clothes cleaning supplies, clothespins, and trash bags were also distributed, aiming to restore a sense of normalcy.

Shelter and clothing: recognizing the need for a warmth environment, and acknowledging the importance of energy in crisis situations; the assistance also extended to energy-related tools. Various types of fuel were made available alongside heating devices to combat the harsh winter conditions. Searchlights, flashlights, candles, batteries, chargers, and electrical transformers were supplied to address lighting and energy power needs.

Food and beverage supply: businesses and NGOs rallied to distribute a range of essential food items. These encompassed groceries, fruits, and vegetables, along with clean drinking water. Nutritional needs were addressed through the provision of legumes, grains, spices, canned food, meat, poultry, fish, dairy products, and nuts. The support extended to infant formula and a comprehensive array of food preparation and eating utensils, including both single-use and reusable drinking cups.

Diverse donations: the spirit of giving took various forms, with generous donations extended. These contributions included automobiles, buses, and trucks to aid in transportation and logistics. The well-being of the youngest survivors was considered, with donations of children's toys, fostering a semblance of normalcy during hard times. Moreover, donations of stationery and school supplies aimed to support education continuity.

Community mobilization: beyond material aid, the response involved the mobilization of volunteers for the collection and preparation of relief parcels. Charitable organizations orchestrated campaigns to collect both in-kind and cash donations, galvanizing community support. Utilizing the reach of social media platforms, efforts were made to amplify donation posts, encouraging wider participation and awareness.

The equitable distribution of relief supplies such as food, water, and clothing, in addition to the delivery of temporary housing amenities for the affected community and health care for the injured, are part of the social and humanitarian aspects (Akbarpour et al. 2020). According to Du (2015), charitable donations are frequently used as a disaster management technique, in this context, literature on CSR and philanthropy indicates that businesses from all over the world engage in relief activities in different ways with variable levels (Jose and Lee 2007; Welford 2005), where large corporations frequently respond philanthropically to humanitarian needs during times of crisis (Zhang et al. 2010), since businesses operate within disaster-stricken areas donating as much as they can to relief (Muller and Whiteman 2009). For instance, approximately half of the Global Fortune 500 firms contributed US$580 million in goods, cash, and services to the Tsunami humanitarian response (Whiteman et al. 2005). NGOs, on the other hand, respond quickly and adapt to disasters and emergencies (Park and Yoon 2022), in which NGOs were successful in quickly reaching communities and providing services such as food and medical care (Shaw 2003), especially for vulnerable people (Lassa 2018).

The Economic Role of Businesses and NGOs

Economic philanthropic activities, such as

partnerships with NGOs, direct cash donations, in-kind donations, cash grants, and pledges, are common activities for affected communities during disasters (Johnson et al. 2011). The economic role was strongly evident through the substantial cash support provided by various companies and NGOs that underwent scrutiny. These organizations displayed their commitment by offering direct financial contributions. In addition to this, a multitude of campaigns orchestrated by the majority of NGOs showcased their dedication to generating funds. Moreover, the economic influence extended to the financial sector, where a significant number of businesses proactively engaged in facilitating the donation process. Among their efforts, these financial entities opened specialized accounts and established dedicated platforms designed exclusively for receiving direct cash donations or indirectly, as was the case of a company that pledged to rebuild 50 housing units destroyed by the earthquake.

Results confirm existing evidence, showing the contribution of businesses to relief efforts in times of crisis and reconstruction (Muller and Kräussl 2011). This not only demonstrated their corporate responsibility but also streamlined the contribution process, making it easier and more accessible for individuals. In essence, the intertwining of economic dynamics within the realm of philanthropy and charitable endeavors highlighted the multifaceted approach adopted by companies and NGOs alike. By providing direct financial aid, tracking contributions, and fostering a culture of giving through targeted campaigns, these entities showcased their commitment to driving positive change. Furthermore, the collaborative efforts between the financial sector and organizations are also relevant to improve the impact of the actions.

The Environmental Role of Businesses and NGOs

Regarding the environmental aspect, natural disasters present both opportunities and risks for raising environmental awareness. Businesses and NGOs should be aware of directing and funding efforts to environmentally vulnerable areas of the world (Ashlin and Ladle 2007), and also to minimize the disaster's environmental impact (Nili et al. 2021). In the context of addressing environmental concerns, a concerted effort was observed through strategic partnerships with energy corporations aimed at effecting positive change, wherein energy corporations lent their support to retrofit new constructions with alternative energy solutions. This was implemented by embracing solar panels, wind turbines, and other eco-friendly technologies, which contribute to sustainable urban development. Additionally, a pivotal role was played in assessing the aftermath of earthquakes, through the provision of expert consultations and professionals. These consultations facilitated thorough evaluations of the structural integrity of damaged buildings, ensuring that reconstruction efforts aligned with both safety standards and ecological considerations.

The commitment to restoring natural ecosystems is also materialized through a widespread tree-planting drive. Moreover, the initiative expanded beyond reforestation to encompass the greening damaged areas. The well-being of animals was not overlooked. The dedication to pet care services was evident as teams of veterinarians were dispatched to offer essential medical attention and veterinary first aid to affected animals. Furthermore, recognizing the heightened risk of fire-related incidents in affected regions, the fire and rescue tools were made available. Collectively, the multifaceted initiatives undertaken by energy corporations, environmental organizations, and various stakeholders under-

scored a unified commitment to mitigating the impact of environmental challenges. Through a combination of innovation, sustainability, compassion, and preparedness, these endeavors paved the way for a more resilient coexistence between humanity and the natural world.

However, the precise role of disaster resolution through environmental reconstruction has received little empirical attention (Mabon 2019). Karaibrahimoglu (2010) and Cheney and McMillan (1990) argue that environmental initiatives are not sufficiently emphasized as they should be in times of crisis. According to Guerrero and Luque (2021), this was evident from their findings, as there was a lack of environmental practices following the earthquake, contrary to the UN's calls for a shift from disaster management to sustainable development management (Desai et al. 2015). In the same fashion, responses to sustainability challenges have also been described as slow and not corresponding to the severity of the problems by Van der Leeuw et al. (2012).

Conclusion

Corporate philanthropy may have reached new heights due to disaster relief, but it is still an insufficiently studied phenomenon (Muller and Whiteman 2009). So, a collaborative effort and collective action are required among various stakeholders (Aitsi-Selmi et al. 2015), including the government, NGOs, business sectors, and citizen participation (Fidler 2005), to raise the level of social and environmental responsibility during disasters. In the context of social responsibility, social networks play a significant role in improving communication effectiveness and participation in initiatives (Kesavan et al. 2013).

Overall, findings indicated that social media platforms helped to publicize initiatives launched by businesses and NGOs, in all the countries analyzed. Moreover, some businesses and NGOs also aimed at encouraging people to donate and volunteer, in addition to habilitating electronic donation platforms to help mitigate the effects of earthquakes; these initiatives were somehow expected since local NGOs and businesses in Middle Eastern Arab countries have a social responsibility mission that should not be underestimated and, according to their capabilities, the majority of them focused on donations due to the nature of the disaster. Therefore, the majority of donations included social necessities for affected communities, such as medical supplies, food and beverages, personal care and hygiene, shelters, and energy tools, where the majority of the necessities were met while taking age and gender diversity into account. In terms of economic donations, cash was the most visible, while environmental issues were considered and given less weight than their economic and social counterparts.

Despite the social responsibility of local NGOs and businesses in the investigated countries, it pales in comparison to the response of international NGOs and businesses to mitigate the earthquakes in Turkey and Syria, such as Save the Children, CARE Türkiye, ActionAid, CARE, Islamic Relief, and Action Against Hunger NGOs (Bond 2023), as well as the response of some international businesses such as Starbucks, Boeing, and Kraft Heinz (Larkin 2023). This gap is logical and widely recognized, due to the widespread nature of these businesses and NGOs, their financial capacity, and the time period of their formation, their experience and specialization in such work. Some of them, such as CARE, was founded in 1945, at the end of World War II, with the goal of providing relief materials in Europe, whereas Save the Children focuses on children's rights (Park and Yoon 2022).

Some limitations apply to this research and must be considered in the interpretation and generalization of the results such as the fact that it is limited to analyzing

only the content of some websites and social media platforms for local NGOs and businesses, rather than international ones, not to mention the role of other local businesses and NGOs. Moreover, there was in addition the significant role played by Middle Eastern governments, which provided unparalleled assistance in this disaster through financial assistance, search and rescue teams, emergency housing, food, and medical support (Cahn and Yavorsky 2023). Nevertheless, some of the findings emerging from this research are adding to the existing evidence, such as, for example, the main types of donations made as aid and the support offered to communities affected by natural disasters, the gaps in the types of assistance, such as the environmental one, and also future research lines on how to bridge these gaps, in addition to providing psychological and social support to those affected by the disaster.

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References

Abitbol, A., and Lee, S. Y. 2017. Messages on CSR-dedicated Facebook pages: What works and what doesn't. *Public Relations Review* 43(4):796-808. https://doi.org/10.1016/j.pubrev.2017.05.002.

Aitsi-Selmi, A., Egawa, S., Sasaki, H., Wannous, C., and Murray, V. 2015. The Sendai Framework for Disaster Risk Reduction: Renewing the global commitment to people's resilience, health, and well-being. *International Journal of Disaster Risk Science* 6(2):164–176. https://doi.org/10.1007/s13753-015-0050-9.

Akbarpour, M., Ali Torabi, S., and Ghavamifar, A. 2020. Designing an integrated pharmaceutical relief chain network under demand uncertainty. *Transportation Research Part E: Logistics and Transportation Review* 136:101867. https://doi.org/10.1016/j.tre.2020.101867.

Alexander, D. 2006. Globalization of disaster: Trends, problems and dilemmas. *Journal of International Affairs* 59(2):1–23.

Alhojailan, M. I., and Ibrahim, M. 2012. Thematic analysis: A critical review of its process and evaluation. *West East Journal of SocialSsciences* 1(1):39-47.

Alsheyab, M., Filimon, N., and Fusté-Forné, F. 2023. Hospitality management in times of crisis: a corporate social responsibility perspective. *International Journal of Islamic and Middle Eastern Finance and Management*. https://doi.org/10.1108/IMEFM-03-2022-0122.

Ashlin, A., and ladle, R. 2007. 'Natural disasters' and newspapers: Post-tsunami environmental discourse. *Environmental Hazards* 7(4):330–341. https://doi.org/10.1016/j.envhaz.2007.09.008.

Austin, L., Fisher Liu, B., and Jin, Y. 2012. How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research* 40(2):188–207. https://doi.org/10.1080/00909882.2012.654498.

Ballesteros, L., Useem, M., and Wry, T. 2017. Masters of disasters? An empirical analysis of how societies benefit from corporate disaster aid. *Academy of Management Journal* 60(5):1682–1708. https://doi.org/10.5465/amj.2015.0765.

Bond. 2023. 'The response to the devastating earthquake in Turkey and Syria: what do we know so far', https://www.bond.org.uk/news/2023/02/the-response-to-the-devastating-earthquake-in-turkey-and-syria-what-do-we-know-so-far/. Accessed 28 February 2023.

Boulianne, S. 2015. Social media use and participation: a meta-analysis of current research. *Information, Communication & Society* 18(5):524–538. https://doi.org/10.1080/1369118X.2015.1008542.

Bowes, J. M., Flanagan, C., and Taylor, A. J. 2001. Adolescents' ideas about individual and social responsibility in relation to children's household work: Some international

comparisons. *International Journal of Behavioral Development*. https://doi.org/10.1080/01650250042000032.

Brammer, S., and Millington, A. 2004. The development of corporate charitable contributions in the UK: A stakeholder analysis. *Journal of Management Studies* 41(8): 1411–1434. https://doi.org/10.1111/j.1467-6486.2004.00480.x.

British Red Cross. 2023. 'The latest news on the earthquakes in Türkiye (Turkey) and Syria', https://www.redcross.org.uk/stories/disasters-and-emergencies/world/turkey-syria-earthquake. Accessed 11 March 2023.

Cahn, S. and Yavorsky, E. 2023. Disaster dynamics: Assessing Middle East responses to the Turkey-Syria earthquake and other destructive events. Washington Institute for Near East Policy, https://www.washingtoninstitute.org/policy-analysis/disaster-dynamics-assessing-middle-east-responses-turkey-syria-earthquake-and-other. Accessed 20 March 2023.

Castells, M. 2015. *Networks of outrage and hope: Social movements in the Internet age*. John Wiley & Sons.

Chen, Y. R., Hung-Baesecke, C. F., and Cheng, Y. 2023. When non-CSR-themed social media influencers endorse corporate CSR initiatives: Effects of publics' perceived influencer characteristics and leadership. *Public Relations Review* 49(1):102288. https://doi.org/10.1016/j.pubrev.2023.102288.

Cheney, G., and McMillan, J. J. 1990. Organizational rhetoric and the practice of criticism. Journal of Cheney, G., and McMillan, J. J. 1990. Organizational rhetoric and the practice of criticism. *Journal of Applied Communication Research* 18(2):93–114. https://doi.org/10.1080/00909889009360318.

Cheng, Y., Jin, Y., Hung-Baesecke, C.-J. F., and Chen, Y.-R. R. 2019. Mobile Corporate Social Responsibility (mCSR): Examining publics' responses to CSR-based initiatives in natural disasters. *International Journal of Strategic Communication* 13(1):76–93. https://doi.org/10.1080/1553118X.2018.1524382.

Chu, S., Chen, H., and Gan, C. 2020. Consumers' engagement with corporate social responsibility (CSR) communication in social media: Evidence from China and the United States. *Journal of Business Research* 110:260-271. https://doi.org/10.1016/j.jbusres.2020.01.036.

Colleoni, E. 2013. CSR communication strategies for organizational legitimacy in social media. *Corporate Communications: An International Journal* 18(2):228-248. https://doi.org/10.1108/13563281311319508.

Coombs, W. T. 2021. *Ongoing crisis communication: Planning, managing, and responding*. Sage.

De Grosbois, D. 2016. Corporate social responsibility reporting in the cruise tourism industry: a performance evaluation using a new institutional theory-based model. *Journal of Sustainable Tourism* 24(2):245–269. https://doi.org/10.1080/09669582.2015.1076827.

Desai, B., Maskrey, A., Peduzzi, P., De Bono, A., and Herold, C. 2015. Making development sustainable: The future of disaster risk management, global assessment report on disaster risk reduction. *Genève, Suisse: United Nations Office for Disaster Risk Reduction*. https://archive-ouverte.unige.ch/unige:78299.

Desi-Nezhad, Z., Sabouhi, F., and Dehghani Sadrabadi, M. H. (2022). An optimization approach for disaster relief network design under uncertainty and disruption with sustainability considerations. *RAIRO - Operations Research* 56(2):751–768. https://doi.org/10.1051/ro/2022021.

Disasters Emergency Committee. (2023), 'TURKEY-SYRIA EARTHQUAKE APPEAL', https://www.dec.org.uk/appeal/turkey-syria-earthquake-appeal. Accessed 3 March 2023.

Dozier, J., McFarland, K, Ghanipoor Machiani, S, Nara, A, Yang, X., and Tsou, M. H. (2019). Improve disaster communication in hyperlocal online and offline communities using social media data: A case study of the 2015 Nepal earthquake. Proceedings in 2019 Annual Meeting of Transportation Research Board (TRB), January 13–17, Washington D.C. https://par.nsf.gov/bib-

lio/10108845.

Drahošová, M., and Balco, P. 2017. The analysis of advantages and disadvantages of use of social media in European Union. *Procedia Computer Science* 109:1005-1009. https://doi.org/10.1016/j.procs.2017.05.446.

Du, X. 2015. Is Corporate philanthropy used as environmental misconduct dressing? Evidence from Chinese family-owned firms. *Journal of Business Ethics* 129(2):341–361. https://doi.org/10.1007/s10551-014-2163-2.

Dufty, N. 2016. Twitter turns ten: Its use to date in disaster management. *Australian Journal of Emergency Management, The* 31(2):50-54.

Elalfy, A., Darwish, K. M., and Weber, O. 2020. Corporations and sustainable development goals communication on social media: Corporate social responsibility or just another buzzword? *Sustainable Development* 28(5):1418–1430. https://doi.org/10.1002/sd.2095.

Eriksson, M. 2018. Lessons for crisis communication on social media: A systematic review of what research tells the practice. *International Journal of Strategic Communication* 12(5):526–551. https://doi.org/10.1080/1553118X.2018.1510405.

Fearn-Banks, K. 2016. *Crisis communications: A casebook approach*. Routledge.

Fidler, D. P. 2005. Disaster relief and governance after the Indian Ocean Tsunami: What role for international law? *Articles by Maurer Faculty*. 398. https://www.repository.law.indiana.edu/facpub/398.

Flora Hung-Baesecke, C., Chen, Y. R., and Boyd, B. 2016. Corporate social responsibility, media source preference, trust, and public engagement: The informed public's perspective. *Public Relations Review* 42(4):591-599. https://doi.org/10.1016/j.pubrev.2016.03.015.

Gautam, R., and Singh, J. 2020. Corporate Social Responsibility: An important tool for NGOs. *International Journal of Business and Administration Research Review* 3(6):18-23.

Ghaderi, Z., Mirzapour, M., Henderson, J. C.,

and Richardson, S. 2019. Corporate social responsibility and hotel performance: A view from Tehran, Iran. *Tourism Management Perspectives* 29:41-47. https://doi.org/10.1016/j.tmp.2018.10.007.

Gomez Carrasco, P., Guillamon Saorin, E., and Garcia Osma, B. 2019. Stakeholder and firm communication in social media: The case of Twitter and Corporate Social Responsibility Information. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3414210.

Guerrero-Miranda, P., and Luque González, A. 2021. Social responsibility, sustainability, and public policy: The lessons of debris management after the Manabí earthquake in Ecuador. *International Journal of Environmental Research and Public Health* 18(7):3494. https://doi.org/10.3390/ijerph18073494.

Hadi, T. A., and Fleshler, K. 2016. Integrating social media monitoring into public health emergency response operations. *Disaster Medicine and Public Health Preparedness* 10(5):775–780. https://doi.org/10.1017/dmp.2016.39.

He, Z., Guo, B., Shi, Y., and Zhao, Y. 2022. Natural disasters and CSR: Evidence from China. *Pacific-Basin Finance Journal* 73:101777. https://doi.org/10.1016/j.pacfin.2022.101777.

He, Z., Guo, B., Shi, Y., and Zhao, Y. 2022. Natural disasters and CSR: Evidence from China. *Pacific-Basin Finance Journal* 73:101777. https://doi.org/10.1016/j.pacfin.2022.101777.

Hinzpeter, K., and Sandholz, S. 2018. Squaring the circle? Integrating environment, infrastructure and risk reduction in post disaster needs assessments. *International Journal of Disaster Risk Reduction* 32:113-124. https://doi.org/10.1016/j.ijdrr.2018.05.016.

Hotho, J., and Girschik, V. 2019. Corporate engagement in humanitarian action. *Critical Perspectives on International Business* 15(2/3):201–218. https://doi.org/10.1108/cpoib-02-2019-0015.

Hughes, A. and Tapia, A. 2015. Social media in crisis: When professional responders meet

digital volunteers. *Journal of Homeland Security and Emergency Management* 12(3):679-706. https://doi.org/10.1515/jhsem-2014-0080.

INSEE, The National Institute of Statistics and Economic Studies. 2022. 'Middle East countries', https://www.insee.fr/en/meta-donnees/definition/c1202. Accessed 22 February 2023.

Izumi, T., and Shaw, R. 2015. *Overview and Introduction of the Private Sector's Role in Disaster Management*, 1–10. https://doi.org/10.1007/978-4-431-55414-1_1.

Jeong, H. J., Paek, H.-J., and Lee, M. 2013. Corporate social responsibility effects on social network sites. *Journal of Business Research* 66(10):1889–1895. https://doi.org/10.1016/j.jbusres.2013.02.010.

Jin, Y., Liu, B. F., and Austin, L. L. 2014. Examining the role of social media in effective crisis management. *Communication Research* 41(1):74–94. https://doi.org/10.1177/0093650211423918.

Johnson, B. R., Connolly, E., and Carter, T. S. 2011. Corporate social responsibility: the role of Fortune 100 companies in domestic and international natural disasters. *Corporate Social Responsibility and Environmental Management* 18(6):352–369. https://doi.org/10.1002/csr.253.

Jose, A., and Lee, S.-M. 2007. Environmental reporting of global corporations: A content analysis based on website disclosures. *Journal of Business Ethics* 72(4):307–321. https://doi.org/10.1007/s10551-006-9172-8.

Kaigo, M. 2012. Social media usage during disasters and social capital: Twitter and the Great East Japan earthquake. *Keio Communication Review* 34(1):19-35.

Karaibrahimoglu, Y. Z. 2010. Corporate social responsibility in times of financial crisis. *African journal of Business management* 4(4):382.

Kesavan, R., Bernacchi, M. D., and Mascarenhas, O. A. 2013. Word of mouse: CSR communication and the social media. *International Management Review* 9(1):58-66.

Kleinheksel, A. J., Rockich-Winston, N., Tawfik, H., and Wyatt, T. R. 2020. Demystify-

ing content analysis. *American Journal of Pharmaceutical Education* 84(1):7113. https://doi.org/10.5688/ajpe7113.

Larkin, E. 2023. 'How brands are supporting Turkey and Syria after the earthquake devastated the two countries', *PRWeek*. https://www.prweek.com/article/1813415/brands-supporting-turkey-syria-earthquakes-devastated-two-countries#:~:text=Kraft%20Heinz%2C%20Starbucks%20and%20Boeing,organiza-tions%20that%20have%20pledged%20dona-tions.&text=NEW%20YORK%3A%20So me%20of%20the,7.8%20and%207.5%20ma gnitude%20earthquakes. Accessed 07 March 2023.

Lassa, J. A. 2018. Roles of non-government organizations in disaster risk reduction. In *Oxford Research Encyclopedia of Natural Hazard Science*. Oxford University Press. https://doi.org/10.1093/acrefore/978019938 9407.013.45.

Lee, K., Oh, W.-Y., and Kim, N. 2013. Social media for socially responsible firms: Analysis of Fortune 500's Twitter profiles and their CSR/CSIR ratings. *Journal of Business Ethics* 118(4):791–806. https://doi.org/10.1007/s10551-013-1961-2.

Lenhart, A. 2015. 'Teens, technology & friendships: Video games, social media and phones play an integral role in how teens meet and interact with friends', Pew Research Center, http://www.pewInternet.org/2015/08/06/tee ns-technology-and-friendships/ . Accessed 27 February 2023.

Lewandowsky, S., Ecker, U. K., and Cook, J. 2017. Beyond misinformation: Understanding and coping with the "Post-Truth" Era. *Journal of Applied Research in Memory and Cognition* 6(4):353-369. https://doi.org/10.1016/j.jarmac.2017.07.008.

Mabon, L. 2019. Enhancing post-disaster resilience by 'building back greener': Evaluating the contribution of nature-based solutions to recovery planning in Futaba County, Fukushima Prefecture, Japan. *Landscape and Urban Planning* 187:105-118. https://doi.org/10.1016/j.landurbplan.2019.03.013.

Macnamara, J. 2016. Organizational listening: Addressing a major gap in public relations theory and practice. *Journal of Public Relations Research* 28(3–4):146–169. https://doi.org/10.1080/1062726X.2016.1228064.

Macnamara, J. (2018). Toward a theory and practice of organizational listening. *International Journal of Listening* 32(1):1–23. https://doi.org/10.1080/10904018.2017.1375076.

Marks, D., and Yardley, L. 2004. *Research methods for clinical and health psychology*. SAGE Publications, Ltd. https://doi.org/10.4135/9781849209793.

Miladi, N., and Mellor, N. Eds. 2020. *Routledge handbook on Arab media*. Routledge. https://doi.org/10.4324/9780429427084.

Miladi, N., Messaoud, M. ben, Alkhateeb, G., Ashour, A., Al-Mohannadi, H., Fetais, A., Alorfe, A., and Alabidi, F. 2022. Digital youth in Qatar: Negotiating culture and national identity through social media networks. *Journal of Arab & Muslim Media Research* 15(2): 151–177. https://doi.org/10.1386/jammr_00045_1.

Muller, A., and Kräussl, R. 2011. Doing good deeds in times of need: a strategic perspective on corporate disaster donations. *Strategic Management Journal* 32(9):911–929. https://doi.org/10.1002/smj.917.

Muller, A., and Whiteman, G. 2009. Exploring the geography of corporate philanthropic disaster response: A study of Fortune Global 500 firms. *Journal of Business Ethics* 84(4): 589–603. https://doi.org/10.1007/s10551-008-9710-7.

Murár P. 2011. Marketing na Twitteri. Bratislava: WebSupport. 133 s. ISBN 978-80-970814-8.

Nili, M., Seyedhosseini, S. M., Jabalameli, M. S., and Dehghani, E. 2021. A multi-objective optimization model to sustainable closed-loop solar photovoltaic supply chain network design: A case study in Iran. *Renewable and Sustainable Energy Reviews* 150:111428. https://doi.org/10.1016/j.rser.2021.111428.

Păceşilă, M., and Colesca, S. E. 2020. Insights on social responsibility of NGOs. *Systemic Practice and Action Research* 33(3):311–339. https://doi.org/10.1007/s11213-020-09520-1.

Park, E., and Yoon, D. 2022. The value of NGOs in disaster management and governance in South Korea and Japan. *International Journal of Disaster Risk Reduction* 69:102739. https://doi.org/10.1016/j.ijdrr.2021.102739.

Pierre-Louis, F. 2011. Earthquakes, nongovernmental organizations, and governance in Haiti. *Journal of Black Studies* 42(2):186–202. https://doi.org/10.1177/0021934710395389.

Ray, A., and Bala, P. K. 2020. Social media for improved process management in organizations during disasters. *Knowledge and Process Management* 27(1):63–74. https://doi.org/10.1002/kpm.1623.

Rebai, S., Azaiez, M. N., and Saidane, D. 2016. A multi-attribute utility model for generating a sustainability index in the banking sector. *Journal of Cleaner Production* 113: 835–849. https://doi.org/10.1016/j.jclepro.2015.10.129.

Schreier, M. 2012. *Qualitative content analysis in practice*. Sage publications.

Shaw, R. 2003. The role of nongovernmental organizations in earthquake disaster management: An Asian perspective. *Regional Development Dialogue* 24(1):117-129.

Simon, T., Goldbergb, A., and Adinia, B. 2015. Socializing in emergencies—A review of the use of social media in emergency situations. *International Journal of Information Management* 35(5):609–619. https://doi.org/10.1016/j.ijinfomgt.2015.07.001.

Skouloudis, A., Evangelinos, K., and Malesios, C. 2015. Priorities and perceptions for Corporate Social Responsibility: An NGO perspective. *Corporate Social Responsibility and Environmental Management* 22(2):95–112. https://doi.org/10.1002/csr.1332.

Social Media Examiner. 2021. '2021 Social Media Marketing Industry Report', *Social Media Examiner*, https://www.socialmediaexaminer.com/report/. Accessed 14 June 2023.

Societal. 2012. 'NON-profit, but PRO-Social Responsibility', https://reper21.ro/project/societal/. Accessed 03 March 2019.

Starbird, K. 2017. Examining the alternative media ecosystem through the production of alternative narratives of mass shooting events on Twitter. *Proceedings of the International AAAI Conference on Web and Social Media* 11(1):230–239. https://doi.org/10.1609/icwsm.v11i1.14878.

Sylvaine Poret. 2014. Corporate-NGO partnerships in CSR activities: why and how? *Hal*. ⟨hal-01070474⟩.

Takeuchi, K., Elmqvist, T., Hatakeyama, M., Kauffman, J., Turner, N., and Zhou, D. 2014. Using sustainability science to analyse social–ecological restoration in NE Japan after the great earthquake and tsunami of 2011. *Sustainability Science* 9(4):513–526. https://doi.org/10.1007/s11625-014-0257-5.

The Arab Social Media Report. 2017. *Social media and the Internet of Things: Towards data-driven policymaking in the Arab World* (Vol. 7) , Dubai: MBR School of Government, https://www.mbrsg.ae/home/research/innovation-and-future-governments/arab-social-media-report-2017. Accessed 14 June 2023.

Tidball, K. G. 2014. Seeing the forest for the trees: hybridity and social-ecological symbols, rituals and resilience in postdisaster contexts. *Ecology and Society* 19(4):art25. https://doi.org/10.5751/ES-06903-190425.

Treem, J. W., and Leonardi, P. M. 2013. Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Annals of the International Communication Association* 36(1):143–189. https://doi.org/10.1080/23808985.2013.11679130.

Van der Leeuw, S., Wiek, A., Harlow, J., and Buizer, J. 2012. How much time do we have? Urgency and rhetoric in sustainability science. *Sustainability Science* 7(S1):115–120. https://doi.org/10.1007/s11625-011-0153-1.

Welford, R. 2005. Corporate Social Responsibility in Europe, North America and Asia. *The Journal of Corporate Citizenship* 17:33-52.

Whiteman, G. M., Muller, A. R., van der Voort, J., van Wijk, J.C.A.C., Meijs, L.C.P.M. and Piqué, C. 2005. *The Tsunami's CSR Effect: MNEs and philanthropic responses to the disaster*. ERIM Report Series Research in Management ERS-2005-062-ORG, Erasmus University Rotterdam.

Upen. 2019. What is the difference between social responsibility and corporate social responsibility. *Pediaa.com* (6 March 2019). https://pediaa.com/what-is-the-difference-between-social-responsibility-and-corporate-social-responsibility/#Social%20Responsibility (Accessed 2nd August 2023).

Zhang, D., Mahmood, A., Ariza-Montes, A., Vega-Muñoz, A., Ahmad, N., Han, H., and Sial, M. S. 2021. Exploring the impact of Corporate Social Responsibility communication through social media on Banking Customer E-WOM and loyalty in times of crisis. *International Journal of Environmental Research and Public Health* 18(9):4739. https://doi.org/10.3390/ijerph18094739.

Zhang, R., Rezaee, Z., and Zhu, J. 2010. Corporate philanthropic disaster response and ownership type: Evidence from Chinese firms' response to the Sichuan Earthquake. *Journal of Business Ethics* 91(1):51–63. https://doi.org/10.1007/s10551-009-0067-3.

Zhao, M., Wang, F., Zhao, D., and Wei, J. 2015. Using CSR theory to examine disaster aid response to the Wenchuan Earthquake. *Global Business and Organizational Excellence* 34(4):50–59. https://doi.org/10.1002/joe.21614.

Zubiaga, A. 2019. Mining social media for news-gathering: A review. *Online Social Networks and Media* 13:100049. https://doi.org/10.1016/j.osnem.2019.100049