

The Effects of the Earthquake Natural Disasters on Sustainable Corporate Social Responsibility

Hussam AlHaffar, Rym Kazah, Rahaf Akkad, Carolyn Hmicho, Victoria Khnouf
Management and Marketing Department, Faculty of Business Administration, Arab International
University, Damascus, Syria

v-hnouf@aiu.edu.sy

Abstract. This research study shines a light on the impact of the recent earthquake that struck Syria on the corporate social responsibility (CSR) of the business sector, NGOs, charities, and individuals. In this study, the earthquake was considered the independent variable, and CSR was the dependent variable; with the addition of two moderating variables – the location and type of organization – three hypotheses were tested. This study focused on the type of aid, logistics, challenges, and type of organization and locations of the organization. A survey instrument in the form of a questionnaire was used to collect the data needed to analyse the purpose of the research. The questionnaire was distributed to 160 charities, NGOs, individuals, and businesses. A total of 89 (eighty-nine) responses showed that the earthquake positively impacted CSR within different organizations. It also showed that the earthquake's impact on social responsibility varied from one location of an organization to another. Additionally, the results proved that the impact of the earthquake on social responsibility differed depending on the type of organization.

Keywords: earthquake; social responsibility; corporate social responsibility; NGO; charities; business.

1. Introduction

It is necessary to distinguish between a "hazard" and a "disaster" to avoid confusion. Twigg (2001) defines a hazard as "a potential threat to humans and their welfare." It can be in the form of earthquakes, tornadoes, or droughts, which are defined as a "natural hazard. A disaster is the consequence of the impact of a hazard on people. It can be in the form of injury, death, economic loss, etc. The impact of disasters is determined by the level of vulnerability of communities to hazards. This vulnerability is not natural. Instead, the human dimension of disasters is the result of all the economic, social, cultural, institutional, political, and even psychological factors that affect people's lives and living conditions (Twigg, 2001). A sense of community tends to form when a society is badly affected by an event. This can be volunteering or donating to charities, checking up on neighbors and relatives, and actively lending a helping hand. According to Business News Daily's Nadia Reckmann, businesses and organizations also must positively contribute to their community and hold themselves accountable for their contributions to society's well-being through various environmental and social measures. This is called 'corporate social responsibility' (CSR). There are four types of corporate social responsibility: environmental, ethical, philanthropic, and economic. The difference between each is explained in the literature review. The benefits of committing socially responsible acts are that it not only positively impacts employee satisfaction and retention but also helps bolster customer trust and public respect (Pacific Oaks College, 2021). Communities with more trust, civic engagement, and stronger networks are better able to recover from crises than fragmented and isolated crises. Instead, neighbors and friends provide the resources needed for post-disaster recovery (Kuo & Means, 2012). The natural disaster we studied was the 2023 Turkey-Syria earthquake on February 6. With a magnitude of 7.8, the earthquake struck southern and central Turkey and northern and western Syria, leaving a total of 59,259 deaths, 121,704 injured and 297 missing, 8,476 deaths and 14,500 injured, of which were in Syria (2023 Turkey–Syria Earthquake, 2023). When an earthquake of such great magnitude occurs in an undeveloped country such as Syria, it raises a question of the nation's social responsibility, especially since there are sanctions placed on the country which limit the availability of resources. This earthquake especially affected the North-Western region in Syria, notably Latakia, Aleppo, Idlib, and Hama governates. From a business point of view, it is profitable for an organization to prioritize social responsibility as it plays a crucial role in the organization's perception (Reckmann, 2023). This includes customer attractiveness, interested investors, and employee morale, which affects an organization's success. With this in mind, it is more likely that a natural disaster would positively impact CSR, meaning that it would temporarily increase. With the help of surveys and research data, it was made possible to gather information on the impact of natural disasters on social responsibility. This study looked into whether the earthquake strongly impacted CSR, varied on the organization's location, or depended on the organization's type.

2. Literature Review

An earthquake is an intense shaking of the Earth's surface which is caused by movements in the Earth's outermost layer. The location where an earthquake begins is called the epicenter, where the earthquake's most intense shaking is often felt. However, the vibrations from an earthquake can still be felt and detected hundreds or even thousands of miles away from the epicenter. The energy from an earthquake is capable of traveling through Earth in vibrations called seismic waves. Scientists can measure these seismic waves on instruments called seismometers, which detect seismic waves below the instrument and record them as a series of zig-zags. Scientists can determine an earthquake's time, location, and intensity from the information recorded by a seismometer (NASA, 2021). Earthquakes have been one of the most hazardous but least predictable natural disasters. The occurrence of catastrophic earthquakes results in casualties, massive damage to the infrastructure, the vanquishing of societies in a flash, and a sudden downfall in the country's economy (Tahseen et al., 2020). To compare, an earthquake of 7.0 magnitude struck Haiti on January 12, 2010, near Port au Prince - The earthquake caused the death of

more than 220,000 (two hundred and twenty thousand) people and left 1.5 million (one million and five hundred thousand) homeless. It also destroyed most of the region's infrastructure, including the nation's rich cultural heritage, leaving behind 19 million (nineteen million) cubic meters of rubble and debris, which is enough to fill a line of shipping containers stretching from London to Beirut. Besides the initial aid given between January 2010 to July 2010, Haiti continued receiving donations from around the world to help the people get back on their feet. Looking solely at the Disasters Emergency Committee (DEC), the DEC continued providing various types of aid until July 2012, making it a two-and-a-half-year aid. Despite the help Haiti received from around the world, living conditions remain poor today (2010 Haiti Earthquake Facts and Figures n.d.). With this in mind, it would not be outrageous to assume that the same could mean for the areas that were heavily affected by the earthquake in Syria.

Corporate Social Responsibility (CSR) is the idea that a company should play a positive role in the community and consider the environmental and social impact of business decisions. It is closely linked to sustainability – creating economic, social, and environmental value. The four different types of CSR are environmental, ethical, philanthropic, and economic. Firstly, environmental responsibility is when corporations engage in environmentally friendly practices, as they can be big contributors to greenhouse gas emissions, pollution, waste, and natural resource depletion. Depending on a business's size and industry, environmental responsibility can take many different forms. For some companies, it means using alternative energy sources and sustainable materials. For others, it means enacting a company-wide recycling program or donating to and volunteering for local environment-focused organizations. Secondly, ethical responsibility is ensuring a business engages in fair business practices across the board, including treating all employees, stakeholders, and customers ethically and respectfully. This type of CSR can also take a lot of different forms. Some common examples include setting a higher minimum wage, guaranteeing all materials are ethically sourced, and ensuring that all employees receive competitive pay and comprehensive benefits as well as treated with respect.

Thirdly, philanthropic responsibility is when businesses give back to their communities and donate to causes that align with their company mission. This responsibility can be as small-scale as sponsoring a local nonprofit's annual fundraiser or as large-scale as donating a percentage of a business's annual earnings to a prominent cause. Lastly, economic responsibility is when a business makes financial decisions prioritizing doing good, not just making more money. This means that this type of CSR is intertwined with the other types above. For example, this could mean that a business signs a contract with a supplier that uses sustainable materials—even if it costs more.

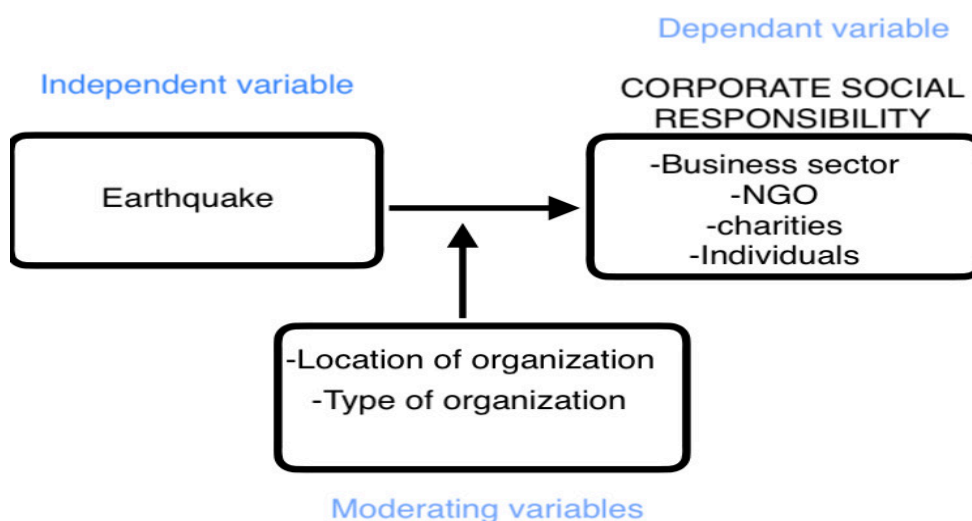


Fig. 1: Research model

Three hypotheses were formulated:

H1: The earthquake had a strong impact on CSR.

H2: The earthquake factor impact will vary on the location of the organization.

H3: The earthquake factor impact will vary on type of organization.

3. Methodology

The methodology highlights the methods used to collect data and analysis that are related to the research. While quantitative and qualitative approaches were used in this study, a deductive approach was used in an analytical manner. A deductive research approach is that when conducting an investigation, "a researcher studies previous works by other researchers, reads their theories, and then tests the hypotheses that they have come up with on those previous studies" (Dudovskiy, n.d.).

4. SPSS Results

This section deals with a detailed description of the procedures that were followed as objectives of the study, through a description of the research method used, the study community, and its sample, a description of the measurement tool and the procedures used to verify its validity and stability and how to apply it to the study sample, as well as a reference to the statistical methods used to process the data statistically.

This questionnaire was designed according to a five-point Likert scale, where (5) means strongly agree, (4) means agree, (3) means neutral, (2) means disagree, (1) means strongly disagree, and thus the comparison between the arithmetic mean. The general items of phrases and hypotheses to accept or reject the hypothesis of the study.

Table 1: Five-point Likert Scale

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Degree 1	Degree 2	Degree 3	Degree 4	Degree 5

Data collection and analysis. The questionnaire was electronically distributed to a sample of charities, organisations, and associations in Syria. It amounted to 89 (eighty-nine) responses, which is a good percentage suitable for analysis. Research tool (questionnaire), consistency, data analysis, and hypothesis testing were conducted by percentages, frequency distributions (descriptive study), and relative weight; one sample t-test; one-way ANOVA test to compare differences according to the type and nature of the organization.

One-way analysis of Variance (ANOVA). One-way analysis of variance ANOVA is a statistical method used to identify a statistical difference in the mean between at least three separate groups; the ANOVA is used to find out the impact that the independent variable has on the dependent one in a regression study (One-way ANOVA in SPSS Statistics, n.d.). The ANOVA was used in this research, considering that more than three variables were to be analyzed in this study.

Search tool persistence. The Cronbach's alpha method was used to measure the stability of the questionnaire, as it expresses the average internal correlation between the statements that it measures, and its value ranges between 0-1, and the acceptable value for it is 0.60 or more.

Table 2: Results of Cronbach's Alpha Test to measure the stability of the resolution

Variable	Number of phrases	Alpha Cronbach
Phrases	9	0.851

Among the results shown in Table 2 is that the value of Cronbach's alpha coefficient was acceptable and ranged between 0.61 and 0.86. thus, the researcher has confirmed the validity and reliability of the study questionnaire, which makes it fully confident in the validity of the questionnaire and its validity for analysing the results, answering the study's questions, and testing the hypothesis.

Statistical Description of the Study Sample. The table shows that the nature of aid was distributed between "food aid" with a rate of 31.8% (thirty-one-point eight percent), and it ranked first.

Table 3: The relative distribution of the nature of aid

Nature of aid	Count	%	Order
Securing residential places	25	10.5	4
Food aid	76	31.8	1
Medicine	70	29.3	2
Clothing	50	20.9	3
Cash subsidies	18	7.5	5
Total	239	100.0	

In the second place, "medicine" with a rate of 29.3% (twenty-nine-point three percent), and in the third place we find "clothing" with a rate of 20.9% (twenty-point nine percent). In fourth place is "securing residential places" with a rate of 10.5% (ten-point five percent). In fifth place are "cash subsidies" with a rate of 7.5% (seven-point five percent).

Table 4: The relative distribution of the sample according to the headquarters of the organization

Location	Count	%
Aleppo	3	3.4
Hama	2	2.2
Homs	23	25.8
Damascus and Damascus suburb	58	65.2
Tartous	1	1.1
Other	2	2.2
Total	89	100.0

The table shows the relative distribution of the study sample around the organization's headquarters, where we find 65.2% in Damascus and its countryside, 25.8% in Homs, 3.4% in Aleppo, 2.2% in Hama and other regions, and Tartous, with a rate of 1.1%.

Table 5: The relative distribution of the sample according to the type and nature of the organisation's work

Type/nature of organization	Count	%
A charity	69	48.6
Individual initiatives	12	8.5
Non-Governmental organization	20	14.1
Global organization	8	5.6
Business sector	9	6.3
Local	24	16.9
Total	142	100.0

The table shows the sample distribution according to the type and nature of the organization's work, where we find 48.6% charities, 16.9% local, 14.1% non-governmental organizations, 8.5% individual initiatives, 6.3% business sector, and 5.6% international organizations.

To find out the level of dependence on the immediate provision of aid, it was measured by extracting the arithmetic means, standard deviation, and their relative importance as follows.

Table 6: The statistical functions for assessing the level of aid provision

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Was aid provided to the affected areas immediately?	Strongly Disagree	1	1.1%	4.42	0.82	16.23	88	0.000
	Disagree	3	3.4%					
	Neutral	4	4.5%					
	Agree	31	34.8%					
	Strongly Agree	50	56.2%					
Total		89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (Was aid provided to the affected areas immediately) amounted to (4.42) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. Evaluation and accreditation in the application (88%) correspond to a very high degree of accreditation, which is higher than the arithmetic mean percentage adopted in this study (60). Moreover, the respondents agree that the assistance was immediate and with a very high statically significant degree.

To find out the level of evaluation of the means of transportation, it was measured by extracting the arithmetic means, standard deviation, and their relative importance as follows.

Table 7: The statistical functions for evaluating the level of providing means of transportation

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Did the means of transportation provide the	Strongly Disagree	1	1.1%	4.01	0.90	10.62	80	0.000
	Disagree	3	3.4%					

necessary assistance to transport aid?	Neutral	20	22.5%					
	Agree	35	39.3%					
	Strongly Agree	30	33.7%					
	Total	89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (did transportation provide the necessary assistance to transport aid) was (4.01) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. The relative approval of this evaluation reached and dependence in the application (80%), which corresponds to a level of dependence with a high degree, which is higher than the percentage of the arithmetic mean adopted in this study, which is (60). The sample agreed that the means of transportation contributed to the transfer of aid, with a (high) statistically significant degree.

To find out the level of evaluation of the effectiveness of all employees or (volunteers), it was measured by extracting the arithmetic means, standard deviation, and their relative importance as follows.

Table 8: The statistical functions for evaluating the level of effectiveness of all employees or volunteers

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Were all workers (or volunteers) effectively managing aid delivery to the affected areas during this period?	Strongly Disagree	1	1.1%	4.29	0.79	15.50	86	0.000
	Disagree	2	2.2%					
	Neutral	6	6.7%					
	Agree	41	46.1%					
	Strongly Agree	39	43.8%					
	Total	89	100.0%					

General arithmetic means of the respondents' estimates for the special phrase (were all workers or (volunteers) effective during this period in managing the delivery of aid to the stricken areas) reached (4.29) out of 5 degrees, which is a greater value than the value of the standard average in this period. The study has a score of 3 degrees, and the relative approval of this evaluation and adoption in the application reached (86%), which corresponds to a high level of accreditation, which is higher than the arithmetic mean ratio approved in this study, which is (60). The total standard deviation value for the mean was (0.79) only. This indicates the convergence of the answers and that they converge around the arithmetic mean, and the sample members agree that the workers were highly effective and statistically significant.

In order to determine the level of evaluation of the impact of atmospheric factors accompanying the earthquake, it was measured by extracting the arithmetic mean, standard deviation, and relative importance as follows.

Table 9: The statistical functions to assess the level of impact of weather factors accompanying the earthquake

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Did the weather factors accompanying the earthquake affect the provision of aid?	Strongly Disagree	6	6.7%	3.17	0.82	1.42	63	0.159
	Disagree	25	28.1%					
	Neutral	12	13.5%					
	Agree	40	44.9%					
	Strongly Agree	6	6.7%					
	Total	89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (did weather factors associated with the earthquake affect the progress of aid provision) amounted to (3.17) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. This evaluation and adoption in the application is (63%), which corresponds to the level of adoption with a medium degree, which is higher than the arithmetic mean percentage adopted in this study, which is (60). Moreover, the respondents agree to a certain extent that weather factors affect the progress of aid provision, which is a statistically significant middle effect.

In order to find out the level of assessment of the impact of the economic situation on the amount of aid, it was measured by extracting the arithmetic means, standard deviation, and their relative importance as follows.

Table 10: The statistical functions to assess the level of impact of the economic situation on the amount of aid

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Does the economic situation affect the amount of aid?	Strongly Disagree	4	4.5%	3.49	0.83	3.80	70	0.000
	Disagree	22	24.7%					
	Neutral	10	11.2%					
	Agree	32	36.0%					
	Strongly Agree	21	23.6%					
	Total	89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (Does the economic situation affect the amount of aid) amounted to (3.49) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. In the application (70%), which corresponds to a level of adoption with a high degree, which is higher than the percentage

of the arithmetic mean approved in this study, which is (60), and the value of the total standard deviation from the mean was (0.83) only, which indicates the convergence of the answers and that they converge around the arithmetic mean. The respondents agree with a high degree of the impact of the economic situation on the amount of aid, which is statistically significant.

In order to find out the level of evaluation of the impact of international sanctions on cooperation with international organizations, it was measured by extracting the arithmetic means, standard deviation, and their relative importance as follows.

Table 11: The statistical functions to assess the level of impact of international sanctions on cooperation with international organizations

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Have international sanctions affected cooperation with international organizations to provide aid?	Strongly Disagree	3	3.4%	3.72	1.17	5.81	74	0.000
	Disagree	14	15.7%					
	Neutral	16	18.0%					
	Agree	28	31.5%					
	Strongly Agree	28	31.5%					
	Total	89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (Have international sanctions affected cooperation with international organizations to provide aid) amounted to (3.72) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. The relative approval of this evaluation and adoption in the application is (74%), which corresponds to a high degree of dependence, which is higher than the arithmetic mean percentage approved in this study (60). Moreover, there is a dispersion in the evaluation, and the respondents agree with a high degree on the impact of international sanctions on cooperation with international organizations to provide aid, which is statistically significant.

In order to find out the level of assessment of the continuity of aid provision, it was measured by extracting the arithmetic mean, standard deviation, and relative importance as follows.

Table 12: The statistical functions to assess the level of continuity of aid provision

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Is the provision of aid continuing till now?	Strongly Disagree	4	4.5%	3.06	0.88	0.51	61	0.614
	Disagree	26	29.2%					
	Neutral	28	31.5%					
	Agree	23	25.8%					
	Strongly Agree	8	9.0%					
	Total	89	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (Does the provision of aid still exist until now) reached (3.06) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. In the application (61%), which corresponds to a level of adoption with a high degree, which is higher than the percentage of the arithmetic mean adopted in this study, which is (60), and the value of the total standard deviation from the mean was (0.88) only, which indicates the convergence of the answers about the arithmetic mean. The sample members agree with a degree Amidst, and there is no consensus about the fact that aid is still in place until now, and it is not statistically significant.

In order to find out the level of evaluation about serving one area more than another, it was measured by extracting the arithmetic mean, standard deviation, and relative importance as follows.

Table 13: The statistical functions for evaluating the level of service in one region more than another and evaluates

Question	Scale	Count	%	Mean	Std. dev.	T	weight %	sig.
Was one area served more than another?	Strongly Disagree	4	4.7%	3.19	0.87	1.60	64	0.114
	Disagree	19	22.1%					
	Neutral	32	37.2%					
	Agree	19	22.1%					
	Strongly Agree	12	14.0%					
	Total	86	100.0%					

The general arithmetic means of the respondents' estimates for the special phrase (Has one area been served more than another) reached (3.19) degrees out of 5 degrees, which is a greater value than the value of the standard average in this study, which is 3 degrees. The relative approval of this assessment and adoption reached In the application (64%), which corresponds to the level of adoption with a middle degree, which is higher than the percentage of the arithmetic mean adopted in this study, which is (60). The value of the total standard deviation from the mean was (0.87) only, which indicates the convergence of the answers about the arithmetic mean. The sample members agree with a degree. There is no consensus about the fact that one region was served more than another, and it is not statistically significant.

5. Hypothesis Results

First hypothesis. "There is a significant effect of the earthquake on corporate social responsibility." According to the study sample, simple linear regression was conducted to find the effect relationship between (earthquake effect) and social responsibility.

Table 14: Functions of correlations and interpretation between the independent variable (earthquake effect) and social corporate responsibility

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	442	0.195	0.186	0.70954
a. Predictors: (Constant), earthquake effect				

We have the measure R, which is the correlation coefficient, whose value is 0.442. We have the measure of the interpretation coefficient, whose value is approximately 44.2%, meaning that the independent variable (the effect of earthquakes) in this model was able to explain 44.2% of the changes that occurred in the subordinate (social responsibility) (Y). The rest is attributed to other factors.

Table 15: Analysis of variance for the study model

ANOVA						
Model		Sum of Squares	Push	Mean Square	F	Sig.
1	Regression	10.605	1	10.605	21.064	Per Month
	Residual	43.800	87	0.503		
	Total	54.404	88			
a. Dependent Variable: Social responsibility						
b. Predictors: (Constant), earthquake effect						

The table shows the analysis of variance, through which the explanatory power of the model as a whole can be known through the $F = 21.0$ statistic and the arithmetic significance ($Sig = 0.000$), which is smaller than the standard significance $sig = 0.05$. This confirms the existence of the explanatory power of the linear regression model from a statistical point of view, i.e., the model as a whole is significant.

Table 16: Statistical functions of the independent impact equation (earthquake effect) and social corporate responsibility

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.456	0.622		2.340	0.022
	earthquake effect	0.773	0.168	0.442	4.590	0.000
a. Dependent Variable: Social responsibility						

We identified that the dimension of the independent variable (the effect of earthquakes) affects the social responsibility dependent by about 0.77, and it is significant in this model according to the t model, where the significance function is $sig < 0.05$, where its value is $sig = 0.000$, and the estimated regression equation is: $CSR = 1.4 + (0.77) (\text{earthquake effect})$.

Thus, earthquakes' impact on institutions' social responsibility is significant.

Second hypothesis. "There are significant differences in the impact of earthquakes on the social responsibility of institutions." Depending on the nature of the work of the association or organization. A ONE-WAY ANOVA test was conducted to find differences in the differences according to the nature

of the organization's work.

Table 17: The statistical functions to test differences according to the nature of the organization's work

Earthquake Effect					
	Sum of Squares	Push	Mean Square	F	Sig.
Between Groups	1.510	6	0.252	4.269	0.021
Within Groups	16.258	82	0.198		
Total	17.767	88			

The table shows that the statistical significance of the SIG differences test is smaller than 0.05. Therefore, there are statistically significant differences in assessing the impact of earthquakes according to the nature of the organization's work.

Third hypothesis. "There are significant differences in the impact of earthquakes on the social corporate responsibility." Depending on the place of work of the association or organization. A ONE-WAY ANOVA test was carried out to find the differences according to the organization's place of work.

Table 18: The statistical functions to test differences according to the place of work of the organization

ANOVA					
Earthquake effect					
	Sum of Squares	Push	Mean square	F	Sig.
Between Groups	1.518	3	0.506	3.647	0.044
Within Groups	16.249	85	0.191		
Total	17.767	88			

The table shows that the statistical significance of the SIG differences test is smaller than 0.05. Therefore, there are statistically significant differences in assessing the impact of earthquakes according to the workplace of the organization's difficulty in finding items of measurement to the questionnaire due to the nature of the study. However, the main challenge in this research was the scarcity of previous studies regarding this topic.

6. Conclusions

We have noticed that this study has multiple limitations. Considering that this study was done freshly after the earthquake crisis, the sectors examined were limited, and due to the disaster, the organizations were worried about answering questionnaires regarding the situation. Another limitation was the difficulty of finding measurement items for the questionnaire due to the nature of the study. However, the main challenge in this research was the scarcity of previous studies regarding this topic in general and in Syria especially. Another limitation that faced us was the economic and political situation of the country alongside the sanctions. Due to privacy policies, not all conference stakeholders had the intention to answer the questionnaire.

The study displayed the following results. As per analysis, we have identified that the local charities had the highest responses during the earthquake (48.6%), whereas the global organization had the lowest participation percentage (5.6%). Additionally, organizations located in Damascus and its suburbs had the highest contribution percentage within the CSR (65.2%). Meanwhile, Tartous ranked the lowest with (1.1%). As for the nature of aid, food aid was the most provided type of aid during this disaster, with (31.8%) and the lowest being cash, with a percentage of (7.5%). The results also revealed that all concerned parties in this study responded immediately to the earthquake (56.2%). They all strongly agreed that the sanctions had affected CSR by (31.5%). These results provide an excellent data source for future research regarding the 2023 Turkey-Syria earthquake disaster, focusing on Syria.

References

Bhat, A. (2023). Secondary research: Definition, methods & examples. Questioner. <<https://www.questionpro.com/blog/secondary-research/>>

Charities Wishing to Support Disaster Relief. ACNC. (n.d.). <<https://www.acnc.gov.au/tools/factsheets/charities-wishing-support-disaster-relief#:~:text=Charities%20play%20an%20important%20role,may%20have%20lost%20loved%20ones>>

Charity. (n.d.) Collins English Dictionary – Complete and Unabridged, 12th Edition 2014. (1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014).

Community Organization in Social Work After Disasters. Regis College Online. (2022, August 24). <<https://online.regiscollege.edu/blog/community-organization-in-social-work-after-disasters/>>

Dan, M. (2017). Research on Structural, Economic, and Social Measures of Enterprise against Earthquake Disasters. Ph.D. thesis. <<https://core.ac.uk/download/pdf/145793686.pdf>>

Dan, M. et al. (2017). Relation between CSR Activities and the Resilience of Local Communities In Iwaki City after the 2011 Tohoku Earthquake. 16th World Conference on Earthquake Engineering: <<https://www.wcee.nicee.org/wcee/article/16WCEE/WCEE2017-4363.pdf>>

Delisle, H., Roberts, J.H., Munro, M. et al. The role of NGOs in global health research for development. *Health Res Policy Sys* 3, 3 (2005). <<https://doi.org/10.1186/1478-4505-3-3>>

Disaster Preparedness, Response, and Recovery. SAMHSA. (2022, August 18). <<https://www.samhsa.gov/disaster-preparedness>>

Donor Perfect. (2012). Charitable Organizations Providing Disaster Relief. Nonprofit Expert. <<https://www.nonprofitexpert.com/charitable-organizations-providing-disaster-relief/>>

Dudovskiy, J. (n.d.). Deductive approach (deductive reasoning) - research methodology. Business Research Methodology. <<https://research-methodology.net/research-methodology/research-approach/deductive-approach-2/>>

Haiti earthquake facts and figures. (2010). Disasters Emergency Committee. (n.d.). <<https://www.dec.org.uk/article/2010-haiti-earthquake-facts-and-figures>>

Jenkins, P. (2022). Why Charities Are Important (and How to Help). Brilliantio. <<https://brilliantio.com/why-charities-are-important/>>

Kanji, R., Agrawal, R. Building a society conducive to the use of corporate social responsibility as a tool to develop disaster resilience with sustainable development as the goal: an interpretive structural modelling approach in the Indian context. *AJSSR* 4, 5 (2019). <<https://doi.org/10.1186/s41180-019-0025-7>>

Kuo, S. S., & Means, B. (2012). Corporate Social Responsibility after disaster. *Washington University Law Review*, 89(5), 979–979. <https://doi.org/10.2139/ssrn.1819392>

Lund Research Ltd. (n.d.). One-way ANOVA in SPSS statistics. One-way ANOVA in SPSS Statistics - Step-by-step procedure including testing of assumptions. <<https://statistics.laerd.com/spss-tutorials/one-way-anova-using-spss-statistics.php>>

McLeod, S. (2023). Likert Scale Questionnaire: Examples & Analysis. *Simply Psychology*. <<https://www.simplypsychology.org/likert-scale.html>>

Nkombi, Z., & Wentink, G. J. (2022). The role of public participation in disaster risk reduction initiatives: The case of Katlehong township. *Jamba (Potchefstroom, South Africa)*, 14(1), 1203. <https://doi.org/10.4102/jamba.v14i1.1203>

Pacific Oaks College. (2021). Breaking Down the 4 Types of Corporate Social Responsibility. *Voices Digital Magazine*. <<https://www.pacificoaks.edu/voices/business/breaking-down-the-4-types-of-corporate-social-responsibility/>>

Reckmann, N. (2023). Corporate Social Responsibility. *Business News Daily*. <<https://www.businessnewsdaily.com/4679-corporate-social-responsibility.html>>

Tehseen, R., Farooq, M. S., & Abid, A. (2020). Earthquake Prediction Using Expert Systems: A Systematic Mapping Study. *Sustainability*, 12(6), 2420. <https://doi.org/10.3390/su12062420>

Twigg, J. (2001). Corporate Social Responsibility and Disaster Reduction: A Global Overview.

United Nations Office for Disaster Risk Reduction. (1993). <https://www.unisdr.org/files/11014_doc76070a1.pdf>

Yükseler, M., & Yazgan, J. (2022). Spontaneous Volunteers in Emergencies and Disasters. *IntechOpen*. doi: 10.5772/intechopen.109330