

This is the published version of a paper published in *Sustainability*.

Citation for the original published paper (version of record):

Barreiro-Gen, M., Lozano, R., Zafar, A. (2020)

Changes in Sustainability Priorities in Organisations due to the COVID-19 Outbreak:

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Sustainability, 12(12): 5031

https://doi.org/10.3390/su12125031

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

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http://urn.kb.se/resolve?urn=urn:nbn:se:hig:diva-32863





Article

# Changes in Sustainability Priorities in Organisations due to the COVID-19 Outbreak: Averting Environmental Rebound Effects on Society

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Received: 21 May 2020; Accepted: 18 June 2020; Published: 19 June 2020



Abstract: The COVID-19 outbreak has affected societies and organisations in an unprecedented way. This has resulted in negative impacts to economic and social issues, but it is a "blessing in disguise" for environmental issues. This paper analyses how the outbreak has affected organisations' sustainability priorities. Prior to the COVID-19 outbreak, such priorities were on the economic dimension followed by the environmental and social dimensions. A survey was sent to 11,657 organisations to analyse such changes, with a 5.60% response rate. The results show that for organisations, the main priority is now on the social dimension, followed by the economic one; however, the environmental dimension has suffered a negative impact in prioritisation, regardless of organisation type, country where they are based, organisation size, or the time they have been working on sustainability. We are currently facing an environmental conundrum, where air quality has improved and pollution has decreased in societies, but organisations are starting to neglect such environmental issues. The COVID-19 outbreak is an opportunity for organisations to better contribute to sustainability by ensuring that the efforts that have been undertaken in the last three decades are not forgotten, and that societies and organisations are better coupled to face such crises and avert rebound effects.

Keywords: organisations; sustainability; environment; priorities; COVID-19 outbreak

## 1. Introduction

The COVID-19 outbreak has halted economic activities throughout the world [1–3], a scenario not seen since the influenza pandemic in 1918. Several countries and territories have instituted lockdown measures for their organisations (e.g., schools, industries, and businesses), suspended travelling, and closed international and state boundaries [4]. Such effects are extremely rare. Even in 2007–2008, when social and environmental concerns were eroded due to short-termism [5], e.g., austerity measures made municipalities less efficient [6], and companies reduced their corporate social responsibility efforts and investment [7], the immediate effects on society were not so severe.

The COVID-19 outbreak has heavily affected the industrial and manufacturing sectors [1]. Global oil demand declined drastically and oil prices fell sharply as industrial and transport sectors came to halt worldwide [1,8]. COVID-19 has had severe negative impacts on human health and the world economy, but it has also led to improvements in the environment due to limited social and economic activities [1,3,9]. Global energy demand declined by 3.8% in the first quarter of 2020, with most of the impact felt in March, and it is expected to decline by 8%, or almost 2.6 gigatonnes (Gt), to the levels of 10 years ago [10]. CO<sub>2</sub> emissions decreased by 25% in China and 6% worldwide [9]. The particulate

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matter concentrations (PM2.5 and PM10) in April 2020 were much lower than those in 2019, suggesting a considerable improvement in the pollution level during the lockdown [4,11]. There has also been a considerable reduction in environmental noise across the world [12], and improvement in surface water quality [4].

The COVID-19 outbreak may be considered as a "blessing in disguise", where pollution is reducing and nature is reclaiming itself; however, the positive impact on the environment may only be temporary if society does not learn from the lockdown and reduce pollution on the long-term [1].

Recent publications on COVID-19 have been on areas such as basic science, diagnosis, drug and vaccine development, social and economic impact, and public health [13]. Google Scholar [14] and Frontiers [15] data show that research has focussed mainly on medicine and health, particularly through an epidemiological approach, with limited research on sustainability issues, and almost none on organisations.

Organisations are an integral part of modern societies [16,17]. Organisations are affected by forces and conditions that operate beyond their boundaries [18], and at the same time, they still have the ability to react to their immediate environment [19]. In rare cases, unpredictable circumstances, such as the COVID-19 outbreak, affect organisations in unprecedented ways [20]. They, as semi-open (or semi-closed) systems [21], are in continual interaction with their external environment, with constant feedbacks between the organisation and external stimuli [22]. Organisations are connected to larger systems and thus affect the balance of the economic, environmental, and social spheres [23–25].

In this context, organisations (civil society organisations (CSOs), companies, and public sector organisations (PSOs)) have been instrumental in contributing to making societies more sustainable [17,26–29]. Organisations have been focusing more on the economic dimension (almost equally in the short-, medium-, and long-term), than on the environmental and social ones, which tend to be more important in the medium- and long-term (see Figure 1) [24].

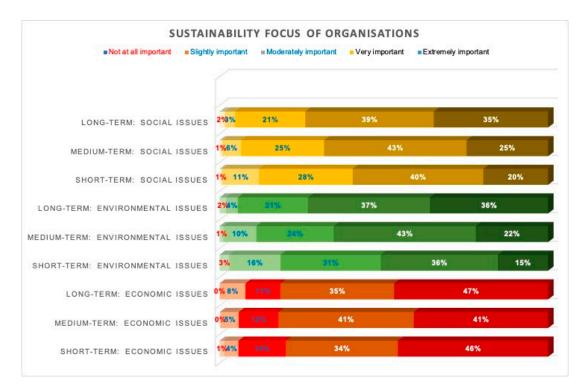


Figure 1. Sustainability focus of organisations [30].

Organisations have been developing several initiatives in different areas to promote sustainability [31,32]. For example, companies have been integrating sustainability into their strategic and operational decision-making processes [33], implementing green chemistry [34], using eco-friendly

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materials, such as green cement [35], and increasing their energy efficiency [36]. Educational institutions have included sustainability in their mission and vision statements [37], reduction of greenhouse gas emissions [38], and water conservation activities [39]. PSOs have also been undertaking sustainability efforts, such as voluntary sustainability reporting based on the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines [40], and environmental reporting practices [41].

Crises, such as the one in 2007–2008 and the current COVID-19 one, can provide opportunities for organisations to better contribute to sustainability (see [7,42,43]).

This paper focusses on how organisational sustainability priorities have changed during the COVID-19 outbreak.

#### 2. Methods

A survey was developed to investigate how COVID-19 has affected organisations and their sustainability efforts. The data collection took place for four weeks starting on 2 April, 2020. The survey was sent in English. The survey consisted of the following sections:

- 1. Organisation characteristics;
- 2. Sustainability questions, including the priorities prior to and during the COVID-19 outbreak;
- 3. Internal and external factors affecting the organisation;
- 4. Impacts on system elements due to COVID-19;
- 5. Sustainability and digitalisation training and engagement.

This paper is focused on Sections 1 and 2 of the survey (the other sections are analysed in other papers currently under preparation).

The survey was sent to a database of 11,657 contacts from different organisations. One reminder was sent out, after which 653 full responses were obtained, i.e., 5.60%. The few non-response items were treated as empty cells in the final database, following Radler and Love [44].

The questions on sustainability priorities were on five-point scale from "Not important" to "Extremely important". Three statistical analyses have been carried out: (1) Descriptive statistics; (2) a "static" approach, comparing the differences in means in the responses of some groups at a particular time (using the Kruskal–Wallis test), focusing on a particular variable (countries, organisation type, organisation size and years working with sustainability); and (3) a "dynamic" approach, comparing the situation for each group prior to and during COVID-19 and calculating the difference, i.e., the time of the survey. These were done with IBM SPSS 24 [45].

# 2.1. Limitations of the Methods

The survey was open during the four weeks of maximum lockdown for most countries, which resulted in a lower response rate than typically expected in surveys open for such a long time. The response rate may have also been affected by the limited time available for potential respondents due to other priorities (e.g., airline companies), self-isolation, COVID-19 infection among staff, and staff with children having to stay at home to look after them. Reliability might have been affected by the perception of, usually, one respondent from each organisation, and by issues with understanding the questions (which were only made available in English). The number of respondents (653) may not allow generalisation to organisations worldwide. The generalisability of the results may also be limited due to using a non-random sampling procedure. A non-response bias may be caused by organisations that were contacted but which refused to complete the survey. Generalisability could be improved by a study based on a randomly selected sample drawn from the total number of organisations active in sustainability.

#### 3. Results

From the sample, 369 of the respondents were male, and 265 were female. The rest selected the "prefer not to say" option. The responses about the type of organisation were 317 from civil

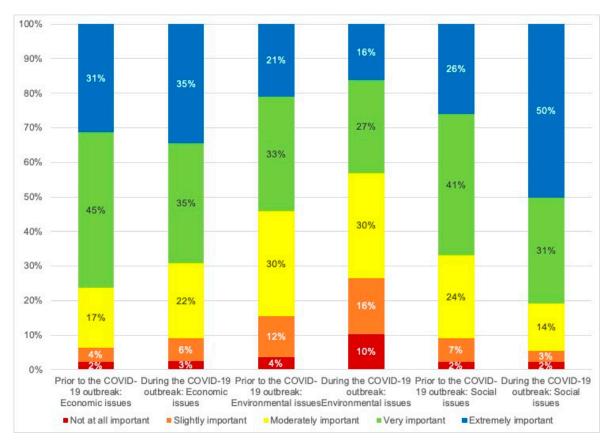
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society, 138 from corporate/business, and 198 from public sector organisations. The responses about the size of organisations were 82 from 1 to 49 employees, 61 from 50 to 249 employees, 55 from 250 to 499 employees, 65 from 500 to 999 employees, 216 from 1000 to 4999, 159 from more than 5000 employees, and 15 did not know. From the responses, 4.56% of the organisations have been working with sustainability issues less than 1 year, 9.61% between 3 and 5 years, 25.08% between 5 and 10 years, 15.15% between 10 and 15 years, and 30.46% more than 15 years.

The respondents were asked about their sustainability priorities, prior to and during the COVID-19 outbreak. After a descriptive analysis using the whole database, four classification variables were selected to test the differences in sustainability priorities: (1) Organisation type, (2) countries where the organisation has its headquarters or it is based, (3) organisation size, and (4) number of years that the organisations have been working on sustainability. The analyses against "gender" as a variable did not show any statistically significant differences.

## 3.1. Descriptive Analysis

A descriptive analysis was carried out to analyse the changes in the sustainability priorities of all organisations. Figure 2 shows such priorities (in percentages) prior to and during COVID-19. Economic priorities were most important prior to the COVID-19 outbreak. More than 80% of the organisations considered the economic priorities extremely important or very important, followed by social priorities (26% of the organisations considered them extremely important and 41% very important). Prior to COVID-19, 54% of the respondents considered the environmental priorities extremely or very important. The COVID-19 outbreak changed these priorities. Organisations increased their social priorities and they decreased their environmental and economic priorities, with the former being the most affected by 6% increase of "not important".



**Figure 2.** Sustainability priorities of all responding organisations prior to and during the COVID-19 outbreak.

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#### 3.2. Organisation Type Analyses

A Kruskal–Wallis test was carried out to test the mean differences among the organisation types (Table 1)): (1) CSOs, (2) corporations, and (3) PSOs. This resulted in statistical differences in all the sustainability dimensions, prior to and during the COVID-19 outbreak. The results show that corporations have concentrated more on economic priorities and less on social ones than the other organisation types, whereas CSOs placed the lowest priority on environmental issues during both periods of time.

Variable	Type of Organisation	N	Mean Rank	p-value
D: 4 d COMP 10 d 1	CSOs	282	282.13	
Prior to the COVID-19 outbreak:	Corporations	132	345.91	***
Economic issues	PSOs	177	280.88	
Di ed COMP 10 de 1	CSOs	282	272.90	
Prior to the COVID-19 outbreak:	Corporations	132	320.00	***
Environmental issues	PSOs	175	311.76	
Di e di COMP 10 di 1	CSOs	281	298.01	
Prior to the COVID-19 outbreak:	Corporations	132	262.71	**
Social issues	PSOs	174	311.26	
D : d COVID 10 d 1	CSOs	280	267.39	
During the COVID-19 outbreak:	Corporations	132	386.03	***
Economic issues	PSOs	173	263.47	
D : 4 COVID 10 4 1	CSOs	281	272.07	
During the COVID-19 outbreak: Environmental issues	Corporations	132	310.95	***
Environmental issues	PSOs	175	318.11	
D : d COVID 10 d 1	CSOs	281	311.69	
During the COVID-19 outbreak:	Corporations	132	238.09	***
Social issues	PSOs	173	306.23	

**Table 1.** Kruskal–Wallis test among different types of organisations.

The averages of organisation type sustainability priorities were calculated prior to and during the COVID-19 outbreak, then the differences between the two periods were compared. As Figure 3 shows, all organisation types reduced their priorities on environmental issues and increased their priorities on social issues. Corporations increased their priorities on economic issues during COVID-19, while CSOs and PSOs reduced them.

	Prior to COVID-19			During COVID-19			Differences			
	Econ.	Env.	Social .	Econ.	Env.	Social .	Diff econ.	Diff env.	Diff social	
	issues	issues	issues	issues	issues	issues	Issues	Issues	issues	
CSOs	3.901	3.436	3.833	3.757	3.068	4.345	0.144	-0.369	0.512	
Corporations	4.273	3.674	3.629	4.477	3.318	3.856	0.205	-0.356	0.227	
PSOs	3.915	3.674	3.931	3.757	3.400	4.335	0.158	-0.274	0.404	

**Figure 3.** Sustainability priorities by type of organisation and differences within each sustainability dimension, prior to and during COVID-19. Green indicates the highest number, in relative terms, in the column, yellow the middle point, and red the lowest one for the sustainability priorities. Blue indicates a positive change between during the COVID-19 outbreak and prior to it, whereas red indicates a negative change.

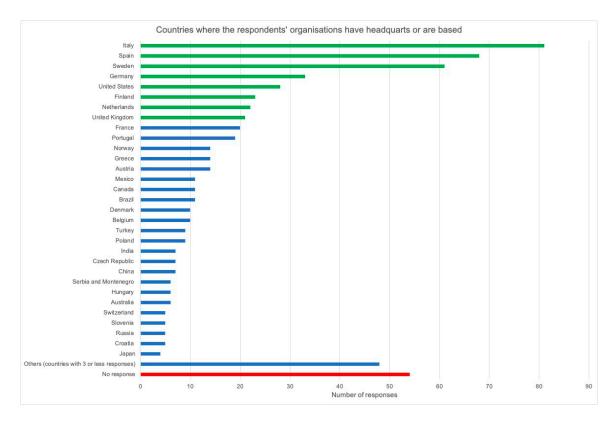
These analyses show that the different organisation types have had different sustainability priorities, but they all have been affected in a similar way due to COVID-19, with the exception of economic issues.

<sup>\*\*\*</sup> *p* < 0.01, \*\* *p* < 0.05.

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## 3.3. Organisation Headquarter/Base Country Analyses

Figure 4 shows the breakdown of the countries where the respondent's organisations have headquarters or are based. The figure shows, in green, the eight countries (Finland, Germany, Italy, Netherlands, Spain, Sweden, United Kingdom, and United States) selected for subsequent analyses, since they had the most responses and constituted half of the sample responses.



**Figure 4.** Number of responses from the countries where the respondent's organisations have headquarters or are based. Countries used for the comparison analysis are represented in green, and in red the ones that chose "No response".

As Table 2 shows, there were statistical differences in the environmental dimension among these countries, prior to and during the COVID-19 outbreak. In the economic and social dimensions, there were differences only during COVID-19, implying a change in the relative priorities after the start of the outbreak.

Prior to the outbreak, Swedish and Dutch organisations had more environmental priorities than organisations from other countries, while Italian organisations were the least focused on environmental aspects.

During COVID-19, the organisations with the highest economic priorities were from the United Kingdom and United States, whereas Italian organisations manifested the lowest economic priorities. Organisations from the United Kingdom had more environmental priorities than the rest, and those from the United States had the least focus. The biggest differences were in social issues (according to the *p*-values) where Italian organisations had the highest focus on social issues, whereas organisations from Germany had the lowest.

The averages for organisations in the eight countries' sustainability priorities were calculated prior to and during the COVID-19 outbreak, then the differences between the two periods were compared, as shown in Figure 5. Organisations from all eight countries decreased their environmental priorities but increased their social ones. Organisations from three countries increased their economic priorities

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(Netherlands, United Kingdom, and United States). The organisations from the other countries decreased their economic priorities at different levels.

Table 2. Kruskal–Wallis test among countries where the organisations are based.

Variable	Country	N	Mean Rank	<i>p</i> -Value		
	Finland	20	154.525			
	Germany	32	162.844			
	Italy	71	155.092			
Prior to the COVID-19 outbreak:	Netherlands	21	134.190			
Economic issues	Spain	61	147.230	0.297		
	Sweden	55	136.600			
	UK	17	177.294			
	US	28	179.500			
	Finland	20	148.550			
	Germany	32	143.297			
	Italy	72	134.042			
Prior to the COVID-19 outbreak:	Netherlands	22	184.341	**		
Environmental issues	Spain	62	142.403	**		
	Sweden	56	185.973			
	UK	16	171.719			
	US	28	154.714			
	Finland	20	137.475			
	Germany	31	156.484			
	Italy	72	158.382			
Prior to the COVID-19 outbreak:	Netherlands	22	156.932			
Social issues	Spain	61	159.172	0.336		
bociai ibbacb	Sweden	55	128.355			
	UK	16	171.094			
	US	28	167.929			
	Finland	20	147.050			
	Germany	32	160.875			
	Italy	70	132.614			
During the COVID-19 outbreak:	Netherlands	21	159.000	**		
Economic issues	Spain	61	144.680	**		
	Sweden	54	145.509			
	UK	17	198.882			
	US	28	188.607			
	Finland	20	144.925			
	Germany	32	138.813			
	Italy	72	137.271			
During the COVID-19 outbreak:	Netherlands	22	180.909	**		
Environmental issues	Spain	62	147.581	**		
	Sweden	55	184.991			
	UK	16	190.250			
	US	28	132.339			
	Finland	20	167.900			
	Germany	32	119.828			
	Italy	71	185.282			
During the COVID-19 outbreak:	Netherlands	22	155.659			
Social issues	Spain	61	161.057	***		
22222	Sweden	54	122.204			
	UK	16	163.000			
	US	28	127.018			

<sup>\*\*\*</sup> p < 0.01, \*\* p < 0.05.

The analyses show that, independently of the change in the economic priorities, organisations from these eight countries modified their environmental and social priorities in the same direction (decreasing the environmental ones and increasing the social ones).

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	Prior to COVID-19			During COVID-19			Differences			
	Econ. issues	Env. issues	Social issues	Econ. issues	Env. issues	Social issues	Diff econ. Issues	Diff env. Issues	Diff social issues	
Finland	4.050	3.500	3.600	3.900	3.100	4.250	<b>-0.1</b> 50	-0.400	0.650	
Germany	4.094	3.406	3.935	4.000	3.031	3.969	-0 <mark>.0</mark> 94	-0.3 <mark>75</mark>	0.033	
Italy	3.944	3.361	3.944	3.629	3.028	4.648	-0 <mark>.3</mark> 15	-0 <mark>.333</mark>	0.703	
Netherlands	3.810	3.955	3.864	3.952	3.636	4.273	0.143	-0 <mark>.318</mark>	0.409	
Spain	3.958	3.391	3.915	3.755	3.066	4.395	-0. <mark>2</mark> 03	-0 <mark>.326</mark>	0.480	
Sweden	3.855	3.946	3.618	3.796	3.673	4.019	-0 <mark>.0</mark> 58	-0.274	0.400	
UK	4.021	3.896	3.945	4.153	3.683	4.340	0.132	-0.213	0.395	
US	4.214	3.571	3.964	4.286	2.893	4.000	0.071	-0.679	0.036	

**Figure 5.** Sustainability priorities by countries and differences within each sustainability dimension, prior to and during COVID-19. Green indicates the highest figure, in relative terms, in the column, yellow the middle point, and red the lowest relative figure for the sustainability priorities. Blue indicates a positive change between during the COVID-19 outbreak and prior to it, whereas red indicates a negative change.

# 3.4. Organisation Size

A Kruskal–Wallis test was done to test the mean differences among the following six groups in accordance with the organisation's number of employees (see Table 4): (1) 1–49 employees, (2) 50–249, (3) 250–499, (4) 500–999, (5) 1000–4999, and (6) >5000.

**Table 3.** Kruskal–Wallis test among different organisation sizes.

Variable	Size (employees)	N	Mean Rank	<i>p</i> -Value	
	1–49	76	253.447		
	50-249	57	307.289		
D: (d COVID 10 d 1 E ::	250-499	52	289.577	0.100	
Prior to the COVID-19 outbreak: Economic issues	500-999	59	274.771	0.122	
	1000-4999	188	287.638		
	>5000	148	313.291		
	1–49	75	342.887		
	50-249	56	322.688		
Prior to the COVID-19 outbreak: Environmental issues	250-499	52	256.212	***	
Prior to the COVID-19 outbreak: Environmental issues	500-999	59	288.051	***	
	1000-4999	186	267.882		
	>5000	150	289.333		
	1–49	75	271.907		
	50-249	57	293.825		
Prior to the COVID-19 outbreak: Social issues	250-499	52	274.731	0.714	
Prior to the COVID-19 outbreak: Social issues	500-999	59	271.949	0.714	
	1000-4999	185	299.230		
	>5000	148	292.882		
	1–49	75	328.407		
	50-249	56	306.446		
During the COVID-19 outbreak: Economic issues	250-499	52	281.337	*	
During the COVID-19 outbreak. Economic issues	500-999	58	251.500	•	
	1000-4999	186	275.401		
	>5000	147	291.105		
	1–49	75	355.687		
	50-249	56	305.268		
Duning the COVID 10 outbreeks Environm	250-499	52	281.192	***	
During the COVID-19 outbreak: Environmental issues	500-999	58	309.112	***	
	1000-4999	187	265.273		
	>5000	149	273.993		

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Variable	Size (employees)	N	Mean Rank	<i>p</i> -Value
	1–49	75	240.920	
	50-249	56	253.500	
During the COVID-19 outbreak: Social issues	250-499	52	291.596	**
During the COVID-19 outbreak. Social issues	500-999	59	289.305	**
	1000-4999	185	307.654	
	>5000	148	298.561	

Table 4. Cont.

There were statistical differences according to organisation size, especially during the COVID-19, where small organisations were more concerned about economic and environmental issues than the others. Large organisations were more concerned about the social dimension.

The averages for organisation size sustainability priorities were calculated prior to and during the COVID-19 outbreak, and the differences between the two periods were then compared. As Figure 6 shows, organisations of all sizes reduced their environmental priorities during COVID-19 and increased their social priorities. Only the small organisations increased their economic priorities.

	Prior to COVID-19			During COVID-19			Differences			
	Econ.	Env.	Social	Econ.	Env.	Social	Diff	Diff env.	Diff	
	issues	issues	issues	issues	issues	issues	econ. Issues	Issues	social issues	
1 - 49	3.789	3.867	3.693	4.160	3.693	3.960		-0.173		
50 - 249	4.070	3.750	3.877	4.018	3.339	4.071	-0.052	-0.411	0.194	
250 - 499	3.981	3.346	3.769	3.904	3.135	4.231	0.077	0.212	0.462	
500 - 999	3.898	3.576	3.712	3.724	3.345	4.254	-0.174	0.231	0.542	
1000 - 4999	3.957	3.441	3.876	3.812	3.064	4.330	-0.146	-0.377	0.454	
> 5000	4.088	3.567	3.838	3.912	3.107	4.297	-0.176	-0.459	0.459	

**Figure 6.** Sustainability priorities by organisation size and differences within each sustainability dimension prior to and during COVID-19. Green indicates the highest number, in relative terms, in the column, yellow the middle point, and red the lowest relative figure for sustainability priorities. Blue indicates a positive change between during the COVID-19 outbreak and prior to it, whereas red indicates a negative change.

## 3.5. Years Working with Sustainability

A Kruskal–Wallis test was done to test the mean differences among the following six groups according to the years that the organisation had been working with sustainability (see Table 5): (1) less than 1 year, (2) between 1 and 3 years, (3) between 3 and 5 years, (4) between 5 and 10 years, (5) between 10 and 15 years, and (6) more than 15 years.

<sup>\*\*\*</sup> *p* < 0.01, \*\* *p* < 0.05, \* *p* < 0.10.

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Table 5. Kruskal–Wallis test among different years working with sustainability.

Variable	Years Working with Sustainability	N	Mean Rank	<i>p</i> -Value
	Less than 1 year	28	263.518	
	Between 1 and 3 years	53	284.783	
Prior to the COVID-19	Between 3 and 5 years	90	301.656	0.176
outbreak: Economic issues	Between 5 and 10 years	144	297.347	0.176
	Between 10 and 15 years	89	319.843	
	More than 15 years	176	270.369	
	Less than 1 year	27	102.037	
Prior to the COVID-19	Between 1 and 3 years	53	210.151	
outbreak: Environmental	Between 3 and 5 years	90	234.567	***
	Between 5 and 10 years	144	268.122	
issues	Between 10 and 15 years	87	313.971	
	More than 15 years	177	375.153	
	Less than 1 year	27	194.519	
	Between 1 and 3 years	53	214.792	
Prior to the COVID-19	Between 3 and 5 years	90	285.867	***
outbreak: Social issues	Between 5 and 10 years	143	293.364	***
	Between 10 and 15 years	87	302.328	
	More than 15 years	176	315.673	
	Less than 1 year	28	318.036	
	Between 1 and 3 years	53	267.547	
During the COVID-19	Between 3 and 5 years	90	283.728	0.569
outbreak: Economic issues	Between 5 and 10 years	142	282.708	0.568
	Between 10 and 15 years	88	309.898	
	More than 15 years	174	284.851	
	Less than 1 year	27	123.056	
Denier at the COVID 10	Between 1 and 3 years	53	235.887	
During the COVID-19 outbreak: Environmental	Between 3 and 5 years	89	234.669	***
	Between 5 and 10 years	145	283.231	
issues	Between 10 and 15 years	87	317.075	
	More than 15 years	177	350.096	
	Less than 1 year	27	186.019	
	Between 1 and 3 years	53	238.472	
During the COVID-19	Between 3 and 5 years	89	310.949	***
outbreak: Social issues	Between 5 and 10 years	144	299.514	222
	Between 10 and 15 years	88	290.432	
	More than 15 years	175	298.011	

<sup>\*\*\*</sup> p < 0.01.

There were statistical differences in the environmental and social priorities prior to and during the COVID-19 outbreak. Organisations that have been working with sustainability for the longest time were more concerned with environmental and social issues.

The averages for the organisations' sustainability priorities against the time they have been working with sustainability were calculated prior to and during the COVID-19 outbreak, then the differences between the two periods were compared. As Figure 7 shows, organisations, regardless of years working with sustainability, reduced their environmental priorities during the COVID-19 outbreak but increased their social priorities. Organisations with the least experience working with sustainability (less than a year) were the only ones that increased their economic priorities.

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	Prior to COVID-19			During COVID-19			Differences			
	Econ.	Env.	Social	Econ.	Env.	Social issues	Diff econ.	Diff env.	Diff social	
	100 0100	100 0100	100 0100	100 0100	100 0100	100000	Issues	1556165	issues	
Less than 1 year	3.714	2.185	3.185	4.071	1.889	3.556	0.357	0.296	0.370	
Between 1 and 3 years	3.943	3.019	3.321	3.774	2.792	3.887	-0.170	0.226	0.566	
Between 3 and 5 years	4.056	3.233	3.833	3.878	2.843	4.348	-0.178	0.391	0.515	
Between 5 and 10 years	4.007	3.472	3.846	3.908	3.207	4.264	-0.098	0.265	0.418	
Between 10 and 15 years	4.157	3.736	3.931	4.057	3.414	4.295	-0.100	0.322	0.364	
More than 15 years	3.892	4.102	3.972	3.879	3.672	4.320	-0.013	0.429	0.348	

**Figure 7.** Sustainability priorities by years working with sustainability and differences within each sustainability dimension prior to and during COVID-19. Green indicates the highest number, in relative terms, in the column, yellow the middle point, and red the lowest relative figure for sustainability priorities. Blue indicates a positive change between during the COVID-19 outbreak and prior to it, whereas red indicates a negative change.

## 4. Discussion and Conclusions

The COVID-19 outbreak has affected societies in a way not seen since the influenza pandemic of 1918. This has resulted in negative impacts on economic and social issues, but it is a "blessing in disguise" for environmental issues at a societal level. This paper is one of the first that analyse how the outbreak has affected organisations (as an integral part of societies) and their sustainability priorities.

A survey was sent to almost 12,000 organisations worldwide with the object of analysing their answers in respect of any changes in their priorities due to COVID-19. This achieved a response rate of 5.60% after keeping the survey open for four weeks. The results of the survey clearly show that at this difficult time for organisations, the main priority is to take care of their employees (social issues) and then to survive (economic dimension); however, environmental issues have suffered a negative impact in terms of prioritisation, regardless of organisation type, country where they are based, organisation size, or the time they have been working with sustainability issues. This is in contrast to a normal state of activities, i.e., prior to the COVID-19 outbreak, where such priorities were centred on the economic dimension (as discussed by [27]).

This research highlights that organisations and societies are facing an environmental conundrum, where, for example, air quality has improved and pollution has decreased in societies worldwide, but organisations are starting to neglect such environmental issues. Organisations have to transform crises, such as the COVID-19 outbreak, into an opportunity to better contribute to sustainability (see [7,42,43]), by ensuring that their sustainability efforts undertaken during the last three decades, and in particular for the environmental dimension, are not forgotten. In this way, we will avert environmental rebound effects and ensure that societies and organisations are better coupled to face challenges, such as COVID-19, in the future. This will help to make the world more sustainable for this generation and future ones.

As the COVID-19 outbreak evolves, more research into organisations and their sustainability efforts during this period is needed. Some lines of research could include: Investigating how the outbreak has affected the internal priorities of an organisation (e.g., whether operations or management have been more affected); analysing differences across continents; linking governmental decisions and those of organisations; and comparing the benefits and challenges of moving towards a more digitised world.

**Author Contributions:** Conceptualization, M.B.-G. and R.L.; Data curation, M.B.-G. and R.L.; Formal analysis, M.B.-G. and R.L.; Investigation, M.B.-G., R.L. and A.Z.; Methodology, M.B.-G. and R.L.; Project administration, M.B.-G.; Supervision, R.L.; Writing—original draft, M.B.-G., R.L. and A.Z.; Writing—review and editing, M.B.-G. and R.L. All authors have read and agreed to the published version of the manuscript.

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Funding: This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Muhammad, S.; Long, X.; Salman, M. COVID-19 pandemic and environmental pollution: A blessing in disguise? *Sci. Total Environ.* **2020**, 728, 138820. [CrossRef] [PubMed]

- 2. Saadat, S.; Rawtani, D.; Hussain, C.M. Environmental perspective of COVID-19. *Sci. Total Environ.* **2020**, 728, 138870. [CrossRef] [PubMed]
- 3. WHO Coronavirus Disease 2019 (COVID-19) Situation Reports. April 1 2020. WHO Situat. Rep. 2020, 2019, 1–19.
- 4. Yunus, A.P.; Masago, Y.; Hijioka, Y. COVID-19 and surface water quality: Improved lake water quality during the lockdown. *Sci. Total Environ.* **2020**, *731*, 139012. [CrossRef]
- 5. Correa-Ruiz, C.; Moneva-Abadía, J.M. Special issue on "social responsibility accounting and reporting in times of "sustainability downturn/crisis". *Rev. Contab. Account. Rev.* **2011**, *14*, 187–211. [CrossRef]
- 6. Cepiku, D.; Mussari, R.; Giordano, F. Local governments managing austerity: Approaches, determinants and impact. *Public Adm.* **2016**, *94*, 223–243. [CrossRef]
- 7. Giannarakis, G.; Theotokas, I. The Effect of Financial Crisis in Corporate Social Responsibility Performance. *Int. J. Mark. Stud.* **2011**, *3*, 2–10. [CrossRef]
- 8. Zambrano-Monserrate, M.A.; Ruano, M.A.; Sanchez-Alcalde, L. Indirect effects of COVID-19 on the Environment. *Sci. Total Environ.* **2020**, *728*, 138813. [CrossRef]
- 9. Dutheil, F.; Baker, J.S.; Navel, V. COVID-19 as a factor influencing air pollution? *Environ. Pollut.* **2020**, 263, 114466. [CrossRef]
- 10. IEA. Global Energy Review 2020; IEA: Vienna, Austria, 2020.
- 11. Dantas, G.; Siciliano, B.; França, B.B.; da Silva, C.M.; Arbilla, G. The impact of COVID-19 partial lockdown on the air quality of the city of Rio de Janeiro, Brazil. *Sci. Total Environ.* **2020**, 729, 139085. [CrossRef]
- 12. Ro, C. Is Coronavirus Reducing Noise Pollution? *Forbes*. Available online: https://www.forbes.com/sites/christinero/2020/04/19/is-coronavirus-reducing-noise-pollution/#55570287766f (accessed on 15 May 2020).
- 13. Researchgate COVID-19 Research Community. Available online: https://www.researchgate.net/community/COVID-19 (accessed on 15 May 2020).
- 14. Google Scholar. COVID-19 Online Search. Available online: https://scholar.google.com/scholar?hl=es&as\_sdt=0%2C5&q=covid+19&btnG= (accessed on 6 June 2020).
- 15. Frontiers. Coronavirus Knowledge Hub. Available online: https://coronavirus.frontiersin.org/ (accessed on 6 June 2020).
- 16. Scott, W.R.; Davis, G.F. *Organization: Overview*, 2nd ed.; Elsevier: Amsterdam, The Netherlands, 2015; Volume 16, ISBN 9780080970868.
- 17. Haller, C.R. Sustainability and Sustainable Development. Top. Environ. Rhetor. 2018, 213–233. [CrossRef]
- 18. Jones, G.R. Organizational Theory, Design, and Change, 7th ed.; Pearson Education Limited: Harlow, Englad, 2013.
- 19. Hjorth, P.; Bagheri, A. Navigating towards sustainable development: A system dynamics approach. *Futures* **2006**, *38*, 74–92. [CrossRef]
- 20. Magalhaes, R.; Sanchez, R. Autopoiesis theory and organization: An overview. In *Advanced Series in Management*; Elsevier: Amsterdam, The Netherlands, 2009; Volume 6, pp. 3–25. ISBN 9781848558328.
- 21. Lozano, R. Developing Collaborative & Sustainable Organisations. J. Clean. Prod. 2008, 16, 499–509.
- 22. Daley, C. How organisations learn. Nurs. Manag. 2008, 15, 26–30. [CrossRef] [PubMed]
- 23. Wong, L.; Avery, G.C. Transforming Organisations towards Sustainable Practices. *Int. J. Interdiscipl. Soc. Sci.* **2009**, *4*, 397–408. [CrossRef]
- 24. Porter, L.W.; Lawler, E.E.I.; Hackman, J.R. *Behavior in Organizations*; McGraw-Hill: New York, NY, USA, 1975; ISBN 0 07 050527 6.
- Stacey, R.D. Strategic Management and Organisational Dynamics; Pitman Publishing: London, UK, 1993;
  ISBN 0 273 600982.
- 26. United Nations (UN). UN Agenda 21; United Nations: Rio de Janeiro, Brazil, 1992.
- 27. Holliday, C.O.J.; Schmidheiny, S.; Watts, P. Walking the Talk. The Business Case for Sustainable Development; Greenleaf Publishing: Sheffield, UK, 2002; ISBN 1874719500.
- 28. Lyth, A.; Baldwin, C.; Davison, A.; Fidelman, P.; Booth, K.; Osborne, C. Valuing third sector sustainability organisations–qualitative contributions to systemic social transformation. *Local Environ.* **2017**, 22. [CrossRef]

Sustainability **2020**, *12*, 5031

29. Dururu, J.; Anderson, C.; Bates, M.; Montasser, W.; Tudor, T. Enhancing engagement with community sector organisations working in sustainable waste management: A case study. *Waste Manag. Res.* **2015**, *33*, 284–290. [CrossRef]

- 30. Lozano, R.; Garcia, I. Scrutinizing Sustainability Change and Its Institutionalization in Organizations. *Front. Sustain.* **2020**, *1*. [CrossRef]
- 31. Batista, A.A.d.S.; de Francisco, A.C. Organizational sustainability practices: A study of the firms listed by the Corporate Sustainability Index. *Sustainability* **2018**, *10*, 226. [CrossRef]
- 32. Lozano, R. Proposing a Definition and a Framework of Organisational Sustainability: A Review of Efforts and a Survey of Approaches to Change. *Sustainability* **2018**, *10*, 1157. [CrossRef]
- 33. Thomas, T.E.; Lamm, E. Legitimacy and Organizational Sustainability. *J. Bus. Ethics* **2012**, *110*, 191–203. [CrossRef]
- 34. Giraud, R.J.; Williams, P.A.; Sehgal, A.; Ponnusamy, E.; Phillips, A.K.; Manley, J.B. Implementing green chemistry in chemical manufacturing: A survey report. *ACS Sustain. Chem. Eng.* **2014**, *2*, 2237–2242. [CrossRef]
- 35. Ekincioglu, O.; Gurgun, A.P.; Engin, Y.; Tarhan, M.; Kumbaracibasi, S. Approaches for sustainable cement production-A case study from Turkey. *Energy Build.* **2013**, *66*, 136–142. [CrossRef]
- 36. Bunse, K.; Vodicka, M.; Schönsleben, P.; Brülhart, M.; Ernst, F.O. Integrating energy efficiency performance in production management-Gap analysis between industrial needs and scientific literature. *J. Clean. Prod.* **2011**, *19*, 667–679. [CrossRef]
- 37. Lee, K.-H.; Barker, M.; Mouasher, A. Is it even espoused? An exploratory study of commitment to sustainability as evidenced in vision, mission, and graduate attribute statements in Australian universities. *J. Clean. Prod.* 2013, 48, 20–28. [CrossRef]
- 38. Klein-Banai, C.; Theis, T.L. Quantitative analysis of factors affecting greenhouse gas emissions at institutions of higher education. *J. Clean. Prod.* **2013**, *48*, 29–38. [CrossRef]
- 39. Marinho, M.; Gonçalves, M.D.S.; Kiperstok, A. Water conservation as a tool to support sustainable practices in a Brazilian public university. *J. Clean. Prod.* **2014**, *62*, 98–106. [CrossRef]
- 40. Guthrie, J.; Farneti, F. GRI Sustainability Reporting by Australian Public Sector Organizations. *Public Money Manag.* **2008**, *28*, 361–366. [CrossRef]
- 41. Lodhia, S.; Jacobs, K.; Park, Y.J. Driving public sector environmental reporting: The disclosure practices of Australian Commonwealth Departments. *Public Manag. Rev.* **2012**, *14*, 631–647. [CrossRef]
- 42. Fernández-feijóo Souto, B. Crisis and Corporate Social Responsibility: Threat or Opportunity? *Int. J. Econ. Sci. Appl. Res.* **2009**, *II*, 36–50.
- 43. Arevalo, J.A.; Aravind, D. The impact of the crisis on corporate responsibility: The case of UN global compact participants in the USA. *Corp. Gov.* **2010**, *10*, 406–420. [CrossRef]
- 44. Radler, B.T.; Love, G.D. Behind the Scenes in Integrative Health Science: Understanding and Negotiating Data Management Challenges. In *The Oxford Handbook of Integrative Health Science*; Ryff, C.D., Krueger, R.F., Eds.; Oxford University Press: Oxford, UK, 2018; pp. 22–34. ISBN 9780190676384.
- 45. IBM. IBM SPSS Software 2015; IBM: Armonk, NY, USA, 2015.



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