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Going green during COVID-19: Examining the links between green HRM, green supply chain and firm performance in food Industry of Bahrain: The moderating role of lockdown due to COVID-19

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ABSTRACT

The objective of this study was to examine the role of green Human Resources Management (HRM) in the green supply chain (SC) and firm performance. The relationships between green HRM, green SC, lockdown, and firm performance were examined. In addition to this, the mediating role of green SC and the moderating role of lockdown was examined. The population of the study was based on the food industry of Bahrain and various companies were selected for data collection. Therefore, data were collected from the food supply companies in Bahrain. A questionnaire was used for data collection in which cluster sampling was applied. The findings of the study highlighted that green HRM has major importance for food supply companies. It has a positive role in promoting the performance of food supply companies in Bahrain. Furthermore, green SC also plays a vital contribution to the performance of food supply companies. However, COVID-19 has a negative role in firm performance. The situation of lockdown due to COVID-19 has a negative effect on the performance of these companies.

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1. Introduction

Performance prospects are termed critical in any organization (e.g., Mughal, 2019). Therein, firm performance is seen as the key area of any organization which has a crucial role in the organizational success (Shaikh, Shah, Shah & Nawaz, 2019). To survive in the market, firm performance is the most important part of every company. Most of the companies are now promoting the performance to survive in the market. Because, in every market, the competition is increasing day by day, which shows a major effect on the survival of the companies. Several studies carried out in the field of firm performance and show that it is the most vital part of companies which has a key influence on the success as well as the survival in the market among various other competitors (Amoako-Gyampah, Boakye, Adaku, & Famiyeh, 2019; Basuki & Khuzaini, 2020; Codina et al., 2020; Dihor et al., 2020; Bibi, 2020; Burgos & Bocco, 2020). Along with the other companies, the firm performance of food supply companies also has significant importance for survival. The role of food supply companies is prominent among the countries because these companies provide essential items for the daily routine. Furthermore, it is not possible to store food items for a longer period. Therefore, the supply of food on a daily basis is most important for food supply companies. Food is the essential need of human beings, which is the reason, the importance of food supply companies is quite high for the national as well as at the local level. Previous studies also highlighted the importance of food supply companies (Hu et al., 2010; Panahi et al., 2020).

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Food industry of Bahrain also has vital importance for the local and national levels. It has crucial importance to the economy of Bahrain. The economic development of Bahrain has an important contribution to the food industry. The food industry of Bahrain has a contribution to the economy. It has a contribution to the economy in different ways. For instance, it has contributed to local development. In local areas, food companies collect the food items from various farmers, which causes to increase the income of people. Therefore, it has importance in the welfare of society. Moreover, it has contributed through providing the opportunity of the job to local people. It increases the gross-domestic-product (GDP) of Bahrain by providing various jobs to the people. Along with this, it also has a direct contribution to the economic development of Bahrain as it is given in the various studies that there is an important relationship between the food industry and economy (Pagotto & Halog, 2016; Zouaghi & Sánchez, 2016). However, the food industry is facing several challenges in the market. Especially, the food industry of Bahrain has several issues, such as HRM practices. Due to the issues in HRM practices, the performance of the employees is not consistent. Companies are lacking in the sustainable performance of employees, which shows a negative role in company performance. As better practices related to HR have vital importance among the companies to achieve success in the market. Moreover, SC is also an issue, which could be resolved to achieve higher performance of these companies. SC is the key part of food supply companies in Bahrain. Weakness in the SC system of companies has a negative effect on the overall performance (Nadeem, Alvi, & Iqbal, 2018). As in most companies, SC is the key area that has an influence on performance (Fernández-Caramés, Blanco-Novoa, Froiz-Míguez, & Fraga-Lamas, 2019). Low-level HRM practices have an influence on the SC of the companies, which causes to increase or decrease in the performance of SC activities since there is a relationship between HRM and SC in different business companies (Nejati, Rabiei, & Jabbour, 2017). The problems related to the HRM can be resolved by implementing green HRM practices. Green HRM has a major influence of the employees, which causes to increase in the performance of employees. Better performance of employees affects positively on the supply chain. Therefore, food supply companies should implement various green HR practices to reduce the employee problem in food supply companies. Moreover, the issue in the SC can also be resolved through green SC. Green SC is a vital concept among the companies which has a positive role in enhancing the performance of companies and improving the SC system. Hence, the implementation of green HRM and green SC is important to handle the business in the firm performance of the food industry in Bahrain. However, the situation of COVID-19 has a negative effect on the companies. COVID-19 affects negatively on all the businesses, which shows a negative impact on food supply companies. The performance of the food supply industry is decreased with high speed due to the lockdown. Therefore, the lockdown issue is continuously decreasing the performance of the food industry. Several studies have examined the food industry through different aspects (Purwanto, Asbari, & Budi Santoso, 2019; Xu et al., 2019). However, these studies have not examined the effect of green HRM, and green SC in connection to the COVID-19. Figure 1 shows the relationship between green HRM, green SC, lockdown, and firm performance.

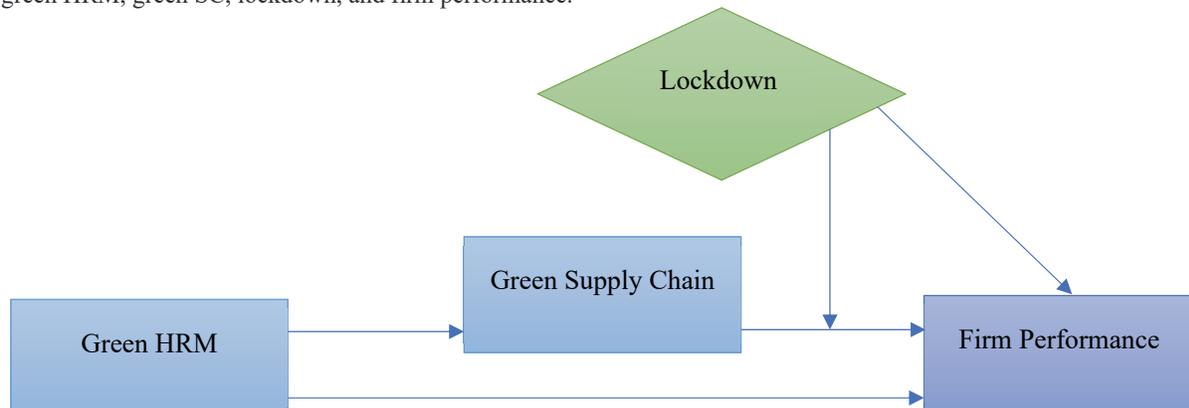


Fig. 1. Theoretical framework of the study showing the relationship between green HRM, green supply chain, lockdown and firm performance

2. Hypotheses Development

2.1 Green HRM and Firm performance

The term green HRM is generally used to denote the contribution of different HRM policies as well as practices towards the broader corporate environmental agenda among the organizations. It denotes to using every employee in the organization to support sustainable activities to increase employee responsiveness along with the commitments on the various issues of sustainability. Green HRM is one of the newly developed notions which has several advantages for the companies. Green HRM has received and hence attracted significant scholarly research in the recent past (e.g., Umrani et al., 2020; Ahmed et al., 2019). These practices have major importance for companies due to the several advantages. Particularly, it has a major relationship with the performance of companies directly as well as indirectly. Indirectly, it has influence through employees. Because green HRM has the most important role in the performance of the employees. Generally, it has the potential to improve performance, which leads to higher firm performance. As given in previous studies that green HRM has an effect on the performance (Anwar et al., 2020; Singh et al., 2020). Therefore, in the food industry, the role of green HRM cannot be neglected. To promote the performance of various food supply firms in Bahrain, the proper execution of green HRM is

the most important role among the companies. Better implementation of these practices leads to better performance. As mentioned by the Ghouri, Mani, Khan, Khan, and Srivastava (2020), business performance can be enhanced with the help of green HRM. Thus, it leads to the following hypothesis;

Hypothesis 1. Green HRM has positive influence on firm performance.

2.2 Green HRM and Green SC

SC is the vital part of food companies, which has a major role in supplying the food to different customers. A SC is one of the networks among the companies and different suppliers to yield as well as allocate a definite product to the customers. This network of the company, along with the suppliers, comprises different activities, people, information with different resources. In the food industry, the efficient SC process is required because to fulfill the customer needs on time is most important for the satisfaction of customers, and it ultimately increases the performance. Efficient SC is needed in the food industry because this industry is dealing with the perishable products which must be distributed in a given time. These products cannot stay for an extended period of time. Therefore, each product has a specific and limited expiry date. Hence, to supply products within the period is most important for these companies, which require efficient SC. The efficiency can be increased by introducing a new notion of SC called green SC. Green SC is the currently prevailing concept among the industries which provide better results. Several studies highlighted that green SC is the emerging concept which has a vital role in companies (Kurian, 2018; Zhang & Yang, 2020; Bricchieri-colombi, 2020; Janssen, 2020; Auriacombe & Sithomola, 2020; Basheka & Auriacombe, 2020; Abdi Zarrin et al., 2020; Abulela & Davenport, 2020). These SC processes are influenced by the employee of the company. Therefore, green HRM has an important connection with green SC. Efficient employees have the potential to enhance green SC. As there is an important connection between SC and employees of the company. Therefore, green HRM has an effect on the green SC which lead to the below hypothesis;

Hypothesis 2. Green HRM has a positive influence on green SC.

2.3 Green SC and Firm Performance

The aforementioned sections highlighted that green HRM has a notable role in green SC and firm performance among the companies related to the food industry in Bahrain. The current section shows the role of green SC in firm performance. In those companies where the supply of various products is important such as food supply companies, the role of SC is crucial. High-quality SC is the guaranty of higher performance by the food industry. As mentioned in the previous studies that SC and firm performance is important for success (Agyabeng-Mensah et al., 2020; Bu, Dang, Wang, & Liu, 2020). Therefore, in the food industry, the performance of SC must be having a good quality to increase firm performance. A low-level supply of food to different clients shows a negative influence on the performance of companies. Therefore, to achieve higher performance by the food industry of Bahrain, the green SC must be at high quality. Additionally, the above discussion shows that green SC playing a mediating role between green HRM and firm performance which is given in below hypotheses;

Hypothesis 3. Green SC has a positive influence on firm performance.

Hypothesis 4. Green SC mediates the relationship between green HRM and firm performance.

2.4 Lockdown

In the current year, the role of COVID-19 has remained most harmful to the world economy. The business is decreasing day by day due to the COVID-19 spread. Markets are close, and the revenue of the businesses is declined. In the situation of COVID-19, most of the countries are stopped working and restricted the people to remain inside the houses. Social distancing is one of the major precautions to prevent COVID-19. Therefore, the business of the food industry is also decreased due to the lockdown. However, the business of the food industry is still working in lockdown because the food is the great importance for survival in the earth. However, it shows a negative role in the performance of the business. As discussed by the previous studies that the business is decreased due to lockdown (Suryawanshi, 2020). In this situation, the food industry of Bahrain is also facing performance-related issues. Due to the spread of COVID-19, the situation of lockdown is increasing, which causing to decrease in the firm performance in the food industry. Hence, the following hypotheses are proposed;

Hypothesis 5. Lockdown has a negative influence on firm performance.

Hypothesis 6. Lockdown moderates the relationship between green SC and firm performance.

3. Research Methodology

3.1 Research Design

According to the several previous studies, the selection of research design is vital, which must be in line with the objective of the study. In this direction, to examine the relationship between green HRM, green SC, lockdown, and firm performance, the study followed a cross-sectional research design. The quantitative approach was used in this study. The cross-section

design is sustainable in the current nature of the study. In this research design, data were collected on one point of time to examine the effect of green HRM on SC and firm performance. The cross-sectional design is most suitable as various studies recommended this design while examining the effect of one variable on others (Lou et al., 2010).

3.2 Sample Size and Data Collection

The section of the sample size is also another important part of every research study. The sample must represent the whole population and should cover the whole population to get better results in every research study. Therefore, by considering the population for the current study, the 400-sample size is preferred for data collection. The population of the study is the food industry of Bahrain. All the food supply firm was considered in this study for data collection. Hence, questionnaires were distributed among employees, as the employee of these food supply companies was chosen as the respondents. Four hundred questionnaires were sent to these companies, and data were collected to achieve the objective of this study. While distributing the questionnaires, cluster sampling was preferred for data collection (Albassami, Hameed, Naveed, & Moshfegyan, 2019; Adewumi, 2020; Antoni et al., 2020; Akbar et al., 2020; Al-Blooshi et al., 2020; Altounjy et al., 2020; Dlalisa & Govender, 2020; Antoi et al., 2020; Berejena et al., 2020).

3.3 Questionnaire Design

To inspect the relationship between green HRM, green SC, lockdown, and firm performance, a self-administered questionnaire was designed. The questionnaires were based on the scale items connected to the key variables of the study; green HRM, green SC, lockdown and firm performance. One of the sections of the questionnaire was based on to collect general information about the respondents. The development of the questionnaire was majorly based on previous studies. Finally, this study designed a questionnaire on a Likert scale.

4. Findings

Data analysis is beginning with the preliminary investigation to remove the errors in the data. Fixing all the issues in the data before hypotheses testing is essential. Therefore, before testing the relationship among variables, the current study examined the missing values (Yang et al., 2020) outliers in the data. This process of data analysis is given in Table 1.

Table 1
Data Statistics

	No.	Missing	Mean	Median	Min	Max	SD	Excess	Skewness
GHRM1	1	0	3.335	3	1	7	1.547	1.298	1.809
GHRM2	2	0	2.97	3	1	7	1.518	1.118	0.708
GHRM3	3	0	3.148	3	1	7	0.946	-0.239	0.444
GHRM4	4	0	3.318	3	1	7	1.427	0.166	0.597
GHRM5	5	0	3.256	3	1	7	1.507	-0.104	1.562
GHRM6	6	0	3.205	3	1	7	1.589	-0.199	0.602
GHRM7	7	0	3.352	3	1	7	1.458	-1.359	0.49
GHRM8	8	0	3.312	3	1	7	1.398	0.054	0.548
GHRM9	9	0	2.917	3	1	7	0.94	-0.42	0.444
GHRM10	10	0	3.273	3	1	7	1.359	0.1	1.55
GSC1	11	0	3.261	3	1	7	1.492	-0.359	0.61
GSC2	12	0	3.341	3	1	7	1.453	-1.03	0.656
GSC3	13	0	3.347	3	1	7	1.377	0.021	0.659
GSC4	14	0	3.426	4	1	7	0.965	-0.742	1.078
GSC5	15	0	3.403	4	1	7	1.726	-0.808	0.175
GSC6	16	0	3.477	4	1	7	1.928	-0.937	0.249
GSC7	17	0	2.946	3	1	7	2.053	-1.19	0.286
LD1	18	0	3.33	3	1	7	2.098	-01.091	1.402
LD2	19	0	3.352	3	1	7	2.014	-1.064	0.384
LD3	20	0	3.136	2	1	7	2.224	-0.961	0.702
LD4	21	0	3.051	2	1	7	2.159	-0.824	0.736
LD5	22	0	3	2	1	7	2.335	-0.993	0.775
FP1	23	0	2.938	2	1	7	2.18	-0.682	1.871
FP2	24	0	3.057	2	1	7	1.988	-0.612	0.731
FP3	25	0	2.926	2	1	7	1.951	-0.361	0.841
FP4	26	0	3.028	2	1	7	2.23	-0.876	0.765
FP5	27	0	3.045	2	1	7	2.118	-0.771	0.736
FP6	28	0	3.068	2	1	7	2.243	-0.906	0.74
FP7	29	0	2.989	2	1	7	2.419	-1.073	0.774
FP8	30	0	2.92	2	1	7	2.139	-0.605	0.881

The aforementioned Table 1 shows that the data collected from the food industry of Bahrain is accurate to proceed for the further analysis. In the next step of data analysis, Partial Least Square (PLS) was used to test the factor loadings and composite reliability (CR) (Hair et., 2014; Hair et al., 2013; J. F. Hair et al., 2012; Hair Jr, Hult, Ringle, & Sarstedt, 2016) which is shown in Fig. 2. It is indicated that green HRM is measured by using ten scale items, green SC is measured by using seven scale items, lockdown is measured by using five scale items and finally, firm performance is measured by using eight scale items. Results in Table 2 highlighted that all the variables; green HRM, green SC, lockdown and firm performance have factor loadings above 0.5 which is acceptable. Hence, all the scale items were retained, and the analysis was proceeded for next stage of hypotheses testing.

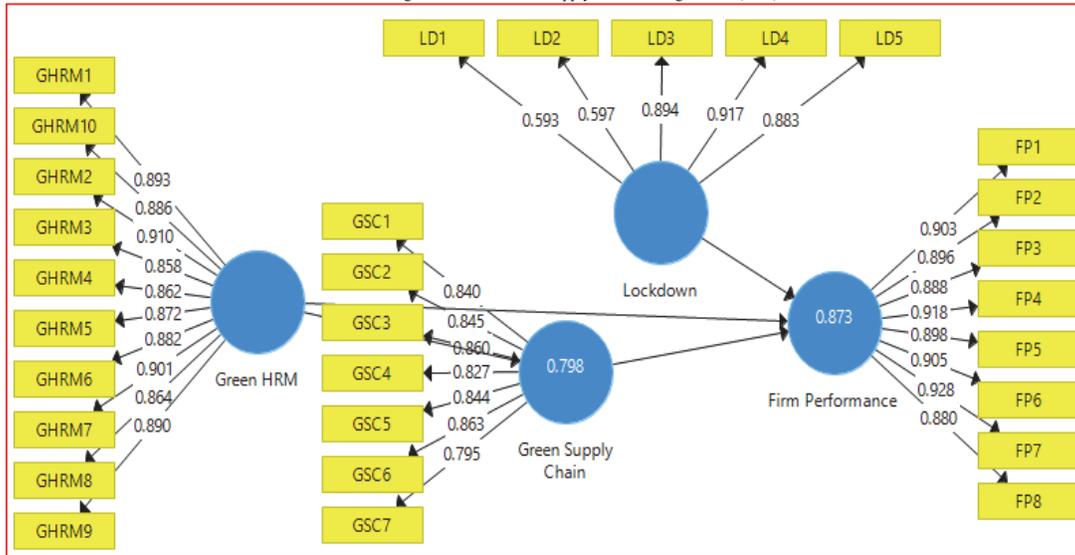


Fig. 2. Measurement Model

Table 2
Factor Loadings

	Firm Performance	Green HRM	Green SC	Lockdown
FP1	0.903			
FP2	0.896			
FP3	0.888			
FP4	0.918			
FP5	0.898			
FP6	0.905			
FP7	0.928			
FP8	0.88			
GHRM1		0.893		
GHRM10		0.886		
GHRM2		0.91		
GHRM3		0.858		
GHRM4		0.862		
GHRM5		0.872		
GHRM6		0.882		
GHRM7		0.901		
GHRM8		0.864		
GHRM9		0.89		
GSC1			0.84	
GSC2			0.845	
GSC3			0.86	
GSC4			0.827	
GSC5			0.844	
GSC6			0.863	
GSC7			0.795	
LD1				0.593
LD2				0.597
LD3				0.894
LD4				0.917
LD5				0.883

After the assessment of factor loadings, this study examined CR, which is given in Table 3. Discriminant validity by using the cross-loadings which are given in Table 4 (Fornell & Larcker, 1981). It is evident from Table 3 that all the variables, namely; green HRM, green SC, lockdown, and firm performance, have CR above 0.7. According to Hair et al. (2017), CR must be above 0.7, and the average variance extracted (AVE) must be above 0.5. It is also proved that all the variables, green HRM, green SC, lockdown, and firm performance have AVE above 0.5.

Table 3
Reliability and Convergent Validity

	Alpha	rho_A	CR	AVE
Firm Performance	0.967	0.968	0.972	0.814
Green HRM	0.968	0.968	0.972	0.778
Green SC	0.931	0.938	0.943	0.704
Lockdown	0.857	0.923	0.889	0.625

Table 4
Cross-Loadings

	Firm Performance	Green HRM	Green SC	Lockdown
FP1	0.903	0.276	0.285	0.783
FP2	0.896	0.33	0.362	0.803
FP3	0.888	0.338	0.356	0.822
FP4	0.918	0.39	0.408	0.822
FP5	0.898	0.319	0.355	0.797
FP6	0.905	0.426	0.441	0.849
FP7	0.928	0.39	0.4	0.863
FP8	0.88	0.357	0.389	0.862
GHRM1	0.283	0.893	0.799	0.402
GHRM10	0.341	0.886	0.79	0.429
GHRM2	0.392	0.91	0.794	0.5
GHRM3	0.363	0.858	0.767	0.471
GHRM4	0.316	0.862	0.814	0.443
GHRM5	0.318	0.872	0.771	0.449
GHRM6	0.375	0.882	0.808	0.494
GHRM7	0.334	0.901	0.801	0.45
GHRM8	0.347	0.864	0.761	0.463
GHRM9	0.39	0.89	0.77	0.473
GSC1	0.354	0.809	0.84	0.467
GSC2	0.34	0.874	0.895	0.472
GSC3	0.32	0.864	0.896	0.471
GSC4	0.299	0.686	0.827	0.466
GSC5	0.376	0.63	0.844	0.527
GSC6	0.401	0.636	0.863	0.572
GSC7	0.369	0.553	0.795	0.591
LD1	0.363	0.632	0.827	0.893
LD2	0.366	0.597	0.806	0.897
LD3	0.878	0.381	0.406	0.894
LD4	0.856	0.377	0.412	0.917
LD5	0.881	0.384	0.412	0.883

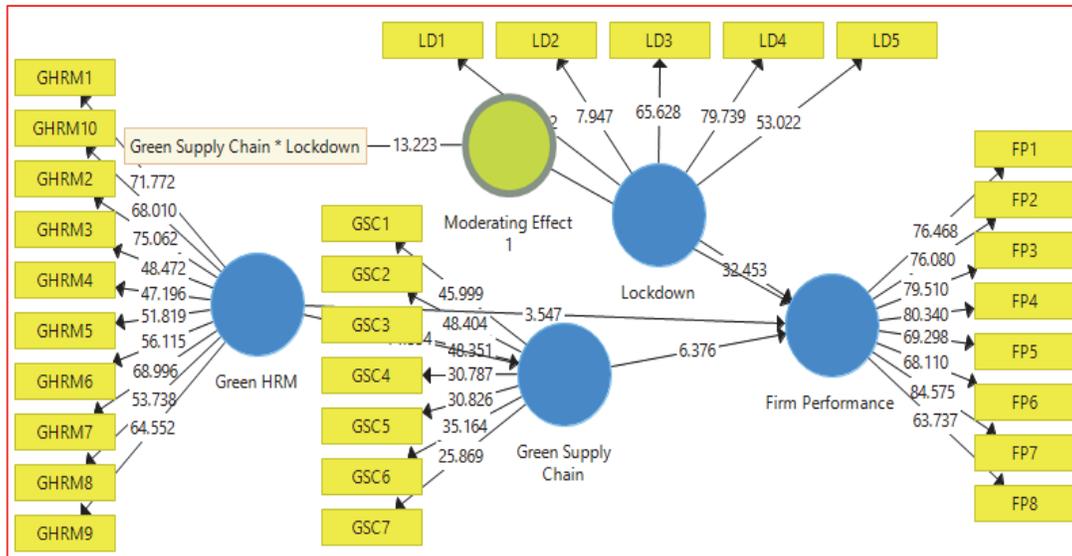


Fig. 3. Structural Model

Finally, after the assessment of preliminary data analysis and after achieving the first step of PLS, the study proceeded for the further step to examine the relationship between variables. Relationship between green HRM, green SC, lockdown and firm performance was examined by using the PLS structural model (Henderson et al., 2016; Henseler & Chin, 2010; Henseler et al., 2014; Henseler et al., 2009) which is shown in Figure 3. The direct effect of green HRM is examined on green SC. The direct effect of green HRM was examined on firm performance. Along with this, the direct effect of green SC was examined on firm performance. Finally, the direct effect of lockdown was examined on firm performance. It is found that green HRM has a direct and positive impact on green SC, green SC has a positive influence on firm performance. Green HRM has a direct and positive effect on firm performance. Finally, it is found that lockdown has a negative role in the firm performance of food supply companies. Along with this, the current study also examined the moderating role of lockdown between green SC and firm performance. The moderating role of lockdown between green SC and firm

performance was found significant with t-value 2.399, which is above 1.96. This moderation effect is negative, which shows the lockdown as moderating variables weaken the positive relationship between SC of the company and firm performance, as shown in Fig. 5.

Table 5
Direct Effect Results

	(O)	(M)	SD	T Value	P Values
Green HRM → Firm Performance	0.198	0.2	0.056	3.547	0
Green HRM → GSC	0.893	0.894	0.013	71.334	0
GSC → Firm Performance	0.389	0.388	0.061	6.376	0
Lockdown → Firm Performance	-1.052	-1.053	0.032	32.453	0
Moderating Effect 1 → Firm Performance	-0.038	-0.04	0.016	2.399	0.031

After examining the direct effect and moderation effect of lockdown, this study also examined the mediating role of green SC. The mediating role of green SC was examined between green HRM and firm performance. It is found that mediating role of green SC between green HRM and firm performance is significant with t-value 6.309. Hence, green SC reflects the positive effect of green HRM on firm performance. This mediation effect is examined by following the instructions of Preacher and Hayes (2008). Finally, the r-square value was examined for firm performance, which is given in Fig. 2. The r-square value for firm performance is 0.873, which shows that all the variables; green HRM, green SC, and lockdown, are expected to bring 87.3% change in firm performance. The direct effect of the histogram is given in Fig. 5.

Table 6. Indirect Effect Results

	(O)	(M)	SD	T Statistics	P Values
Green HRM → Green SC → Firm Performance	-0.347	-0.347	0.055	6.309	0



Fig. 4. Moderating effect of lockdown weaken the positive relationship between green SC and firm performance

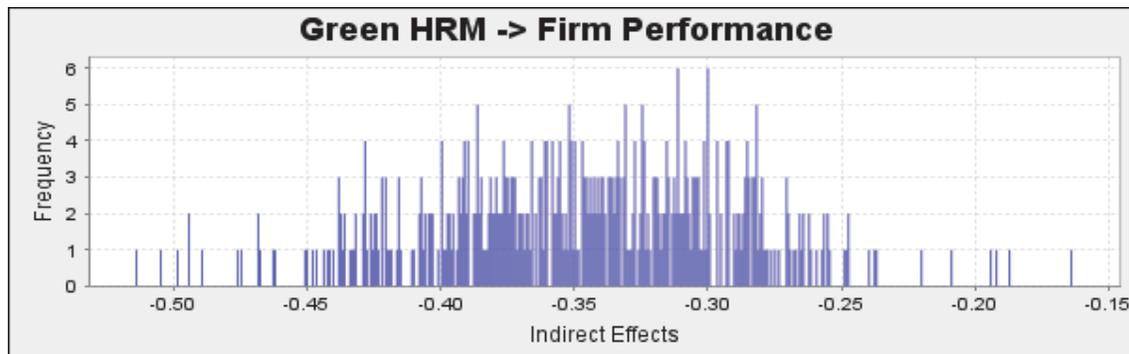


Fig. 5. Indirect Effect Histogram: Green HRM → Green SC → Firm Performance

5. Conclusion

The relationship between green HRM, green SC, lockdown and firm performance were examined in this study. The objective of this study was to observe the role of green HRM in green SC and firm performance. Furthermore, the mediating role of green SC and the moderating role of lockdown was examined. The population of the study is based on the food industry of Bahrain and various companies were selected for data collection by using a survey questionnaire. Findings of the study highlighted that food supply is most important, which is influenced by the HRM practices. Notably, green HRM has a major influence on these companies. The performance of Bahrain food supply companies is affected by green HRM practices. Green HRM has pivotal role to enhance the supply of food and increases performance. The findings of the study

highlighted that green HRM has major importance for food supply companies. It has a positive role in promoting the performance of food supply companies in Bahrain. An increase in the execution of green HRM increases firm performance in Bahrain. Furthermore, green SC also plays a vital contribution to the performance of food supply companies. Since the green HRM has a positive effect on green SC, an increase in green HRM increases the green SC. Moreover, as the green SC shows a positive influence on firm performance; therefore, green HRM increases the green SC, which further increases the firm performance. However, COVID-19 has a negative role in firm performance. Due to COVID-19, the nations are in the condition of lockdown, and business operations are seemingly paralyzed. Therefore, the situation of lockdown due to COVID-19 has a negative effect on the performance of these companies. Implementation of lockdown in Bahrain decreases the firm performance of food supply companies.

5.1 Implications of the Study

Findings of the study provided vital implications. These findings provided implications both for the theory as well as practice. Theoretically, this study examined the valuable relationship between green HRM, green SC, lockdown and firm performance. This relationship is unique because previous studies in the field of food industry have not examined this relationship. Particularly, the role of COVID-19 in the firm performance of food industry was not examined. Especially, the Bahrain food industry was not considered in previous studies in respect to the COVID-19. Furthermore, this study also emphasized the mediating role of green SC. This mediating role was examined between green HRM and firm performance, which is first time examined in the current study. In addition to this, the moderating role of lockdown was also examined. This moderating effect is examined between SC and firm performance which is also not examined in the other studies. Therefore, the current study has several theoretical implications. Along with theoretical implications, this study has vital practical implications. Practical implications are more important for the food industry of Bahrain. The relationship between green HRM, green SC, lockdown and firm performance has major practical importance for food supply companies. As this study suggested that companies should enhance green HRM and green SC to enhance firm performance. Although lockdown decreases the firm performance, however, it can be increased with the help of green HRM.

6. Study Limitations and Future Directions

The current study achieved the significant literature gap by examining the effect of green HRM and SC on firm performance of food industry, however, the study has few limitations which could be the directions for future studies. First, this study conducted in the situation of lockdown, therefore, the companies were not in complete operation, that is the reason, there could be weakness in data collection. Second, the situation of COVID-19 is not similar in each country, therefore, future studies should be examined on the other countries to scrutinize the effect of green HRM and SC on firm performance. Third, this study only considered the whole term; green HRM, for better results, future studies may therefore use various dimensions of green HRM.

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