

AN EFA BASED STUDY ON SUSTAINABILITY: NEW EVIDENCES FROM THE MIDDLE EAST REGION

Salim BAGADEEM

Faculty of Business Studies, Arab Open University, Saudi Arabia
Email: bagadeem@arabou.ed.sa

Moid U AHMAD

Allenhouse Business School, Kanpur, India
Email: Professor.moid@gmail.com

Abstract

Awareness, optimism and the role of individuals and corporates in addressing the environmental sustainability concerns is of prime importance for the future of the planet. Such a study becomes more relevant under the influence of a pandemic. This study dwells into the issues concerning environmental sustainability based on a sample of working individuals. The study is anchored around the exploratory factor analysis but also uses regression analysis and cross tab analysis for data interpretation. The study found three significant factors relevant to environmental sustainability (Organization's concern and contribution to sustainability; Sustainability awareness; Sustainability optimism). A major finding from the study is that an increased level of awareness and optimism will enable the organizations to contribute and care about the environmental and business sustainability.

Keywords: Sustainability; awareness; optimism; EFA.

1. INTRODUCTION

Concerns and issues related to common natural resources are of interest to researchers, corporates and governments. The term 'Sustainability' was coined by the World United Nations Commission on Environment and Development (WCED) in the Brundtland Report. The Brundtland report defines sustainable development as the 'development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs' (see WCED, 1987). According to the Environment Protection Agency (EPA) "to pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations". The preamble of Sustainability Development Goals (SDGs) suggests a five points approach focused on peace, people, planet, prosperity and partnerships. The purpose of the common natural assets of the planet is to sustain lives and the responsibility of the dwellers of the planet is to take care of these natural resources. Carberry et al.,(2018) also found that European investors react negatively to corporate misconduct which could be linked corporate sustainability also.

In simple terms, sustainability refers to any process or entity which directly or indirectly affects the nature and its environment. Environmentally sustainable practices has continued to advance, despite economic downturns and recoveries (Eccles et al. 2014; Haanaes et al. 2011). This is true and has become more imperative in the context of the recent COVID-19 crisis. The importance of sustainability in organizations is increasing as businesses are becoming more conscious of their carbon footprint on the environment in which they operate. Sarkis et al.,(2010) are of the opinion that business sustainability and environment sustainability has gained significance at organizational level primarily because of the economic, political and social pressure from the government and the society. A conscious effort by business organizations on environmental sustainability will effect a positive branding of their business in addition to the long term competitive advantage (Millar et al., 2012). This perspective of business sustainability was validated by Etzion (2007) & Millar et al.,(2012) where they hold the opinion that business managers are now days are recognizing the significant opportunities for their organizations in pursuing improved environmental sustainability to enhance their reputation and for long term competitive advantage. Esty & Winston (2009) found that many organizations are including environmental sustainability in their overall corporate strategy.

According to the Institutional theory (or legitimacy theory) organizations attempt to behave in a socially responsible way to maintain legitimacy and goodwill in the eyes of society. The advantages of doing so includes greater acceptance for their products and services, they get better access to financial capital, improved ability to attract human resource talent and effective synchronization with the society at large (Bansal & Clelland, 2004;Cordeiro & Sarkis, 2008). Additionally, the perception and the awareness level of general public may influence the corporate entities and the government establishments to contribute more towards sustainability concerns. Kamboj & Matharu (2021) found that the perceived consumer effectiveness has a greater descriptive value on their willingness to purchase products than their attitude and perceived knowledge about sustainability issues.

This research is focused on identifying factors concerning sustainability from the perspective of individuals with a focus on public awareness and optimism. The Middle East countries have an abundant non-renewal resources and they are taking initiatives on shifting to a sustainable future (www.weforum.org). A study on sustainability becomes imperative for the region, specifically and in general for the other regions. The perception of individuals influences policy making. Business sustainability and environment sustainability has gained significance at organizational level primarily because of the economic, political and social pressure from the government and the society (Sarkis et al. 2010). Although there are few studies found on related themes, Gerged et al.,(2018) studied environmental disclosure in Middle East and North Africa countries while Ismaeel & Zakaria (2019) studied sustainability reporting,there are hardly any previous studies focusing on perception, awareness and optimism about sustainability on a Middle East sample during COVID-19 times. Thus, it is a novel study in this context.

2. LITERATURE REVIEW

The significance of sustainability to the future of business and vice versa is an issue of constant debate. Additionally, the role of individuals in influencing corporate and public policy framework is also imperative in this context. Kumar & Prakash (2019) found that there is a significant difference in the disclosure internal socio-environmental indicators between public and private sector banks in India. During the 1960s era, in the form of corporate social responsibility (CSR) and later in the 1990's onwards in the form of sustainability concerns and disclosures, various issues for business sustainability have been debated (Whetten et al., 2002).

Callens & Daniel (1999) suggest that business firms should play an important role in the attainment of sustainability goals as they are central to human activities and development. Proops et al., (1999) suggest a mechanism to measure and study sustainability as the value of natural capital plus manufactured capital should not be decreasing (growth rate should not be negative). Pradhan et al., (2017) studied synergies and tradeoffs in the implementation of sustainability goals across countries based on correlations of variables within SDGs. Eccles et al., (2014) demonstrated that firms with a focus on sustainability are able to significantly outperform their competitors and argued that embedding sustainability policies into a company's business model may be a source of competitive advantage in the long-run. Haanaes et al., (2011) reported that in 2009 only 25% (59% in 2010) of respondents claimed they were increasing sustainability efforts. Galbreth & Ghosh (2013) suggest that marginal increases in awareness can benefit all firms.

Anderson & Bateman (2000) suggest that pro-environmental behavior encourages the organizations to preserve natural resources and the environment. Li & Kallas (2021) found that the average willingness to pay premium for sustainable products is 29.5% of the usual price. Ramus & Steger (2000) use the term eco-initiatives to describe action taken by employees who thought that they would improve the environmental performance of the company by being proactive. Kollmuss & Agyeman (2002) defines pro-environmental behavior as a cautious action that seeks to minimize the undesirable impact on the environment. Ramus & Killmer (2007) define 'corporate greening' as a dependent variable in their study representing the changes in organizational practices towards a more environmentally oriented practices. Ciocirlan (2017) used the term 'green employee' as the one having an environmental identity, an intrinsic motivation to protect the environment and a persistent environmental behavior at work and at home.

3. RESEARCH METHODOLOGY

The primary objective of the study is to understand the environmental sustainability issues and concerns of individuals in the context of several demographic factors with a focus on individual awareness and optimism. Here, sustainability refers to environmental sustainability as well as business sustainability. A similar methodology has been used in the past by Renate et al., (2015) and Kumar & Prakash (2019). Glover et al.,(2014) explains an organization's concern for environmental and business sustainability. Galbreth & Ghosh (2013) studied the role of awareness on businesses. Asare et al.(2022) also studied individual perception about the government's efforts on sustainability in the sub-Sahara African region. Li & Kallas (2021) also studied the willingness to pay in food products.

In the light of the research objective, a related questionnaire based survey was used to collect data from respondents, primarily based in the Middle East region. The survey instrument was validated in consultation with two domain experts and a questionnaire was finalized with 26 questions which includes five questions on demographics of the respondents. To measure the responses of individuals, a Likert's scale of 1 (strongly disagree) to 5 (strongly agree) was used. The questionnaire was sent to 300 respondents and 102 usable responses (34%) were received by administering the survey (online due to COVID-19 protocol) during the time period December, 2020 to February,2021.

The demographic variables were converted into binary variables to include them into numerical analysis as dummy variables. For the 'Gender' variable, female respondents were coded as 0 and male as 1. For the educational qualification variable, all respondents who were graduate and below were coded as 0 and rest were coded as 1. For the age variable, all respondents with age 40 years and below were coded as 0 while above 40 years were coded as 1. The respondents with annual income below USD 100000 were coded as 0 and others were coded as 1. Private firm employees and self-employed respondents were coded as 0 while the government employees were coded as 1. Analysis of basic statistics, linear regressions and exploratory factor analysis (EFA) are used as the data analytical techniques.

Based on the research objectives, two null hypothesis were formulated.

- H01:** *Organization's concern for sustainability is not affected by public awareness (see Galbreth & Ghosh,2013)*
- H02:** *Organization's concern for sustainability is not affected by public optimism (see Asare et al.,2022).*

4. DATA ANALYSIS

Initially, a descriptive analysis of the study variables was conducted. It is observed that 49% of the respondents are aged 40 years and below while 51% are more than 40 years of age. About 38% respondents are female while 62% are male respondents where as 90% of the respondents are private or self-employed. In terms of educational qualifications, 30% of the respondents are graduate or below while 70% are post graduate or professionally qualified. About 87% respondents reported an income of 100000 US Dollars or below.

About 68% of the respondents reported that they are aware about organizations which are contributing towards environmental sustainability whereas 57% respondents agree (16% disagree) that they have an understanding of sustainability issues. Additionally, 72% respondents indicate that they are concerned about environmental sustainability while 70% agree that business suitability is important for organizations of the future. Also, 62% respondents indicated their preference to work for a sustainable business, if other parameters are same. Considering the role of organizations in addressing sustainability issues, 46% of the respondents indicated that their organization considers environmental sustainability as an important concern while 43% reported that they were unsure if their organization is contributing towards reducing environmental pollution. There was no clear assessment on efficiency of private sector in addressing sustainability issues as 37% respondents disagree (25% agree) that private sector is better in management of sustainability concerns. About 66% of the respondents indicated that they are willing to pay up to 10% extra for using a sustainable product or service. The research used convenience sampling technique and found the sample to unbiased considering age (49%

are aged 40 years and below) and gender (38% are female respondents). The sample was biased considering the employment type (90% respondents are private or self-employed) and educational qualification (70% are post graduate or professionally qualified). Overall the sample was found suitable for the study.

The highest coefficient of variation (CV) was found as 48% regarding awareness about world leader addressing sustainability concerns while the lowest CV (26%) was observed on the perception of organization's concern for environmental sustainability.

The responses to the questions focused on critical issues related to individual's concern for sustainability were recorded and were reduced into latent factors using Exploratory Factor Analysis (EFA). This is a standard technique used to study the latent factors that underlie scores on a larger number of measured variables or items. Here, we use Eigen value rule to identify factors. Subsequently, Exploratory Factor Analysis (EFA) was conducted using Principal Component Analysis (PCA 1) on the 15 items of data which resulted in three factors with eigenvalues above 1. The total explained variance was observed as 56%. Varimax rotation was selected as the latent construct as factors are expected to be uncorrelated. Kaiser-Meyer-Olkin (KMO=0.77) and Bartlett's test statistics (p-value=0) are given in table 2 and these statistics were found to be satisfactory. Rotation converged in 4 iterations. The factor loading of above 0.5 was set as the default items selection procedure for components. Three components were found and there was one component out of the three which had only one variable.

Researchers have suggested varying numbers of item per factor ranging three to five for representing each factor, MacCallum et al., (1999). A satisfactory EFA should be where total variance explained (TVE) should be more than 60% and the variance explained by last component should be more than 5% (Hair et al.,2012). This rule partially conformed in PCA (Table 1). Here, 'A' indicates the standalone percentage of variance whereas 'B' indicates the cumulative percentage of variance.

TABLE 1 - TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	A	B	Total	A	B	Total	A	B
1	5.18	32.377	32.377	5.18	32.377	32.377	3.834	23.965	23.965
2	2.439	15.246	47.622	2.439	15.246	47.622	3.249	20.309	44.274
3	1.384	8.65	56.272	1.384	8.65	56.272	1.92	11.998	56.272
4	0.996	6.225	62.497						
5	0.899	5.62	68.117						
6	0.832	5.2	73.317						
7	0.757	4.728	78.045						
8	0.698	4.365	82.41						
9	0.559	3.491	85.901						
10	0.526	3.287	89.188						
11	0.445	2.784	91.972						
12	0.325	2.029	94.001						
13	0.303	1.893	95.894						
14	0.275	1.717	97.611						
15	0.207	1.295	98.906						
16	0.175	1.094	100						

Extraction Method: Principal Component Analysis

TABLE 2 - KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.765
Bartlett's Test of Sphericity	Approx. Chi-Square	666.933
	Degrees of freedom	120
	Significance	0

TABLE 3 - ROTATED COMPONENT MATRIX

Items/survey questions	Component		
	1	2	3
I understand the concept of Sustainability		0.672	
Environmental sustainability is a real concern for the world		0.848	
Business sustainability is a real concern for the future of organizations		0.695	
Own interest exceeds common interest' for environmental sustainability related issues		0.503	
I contribute to charity/ philanthropy		0.558	
I would prefer to work with a sustainable business, if other terms remain same		0.763	
Your organization is an equal opportunity employer	0.677		
Your organization is taking initiatives to reduce poverty in the society	0.684		
Your organization is taking initiatives to reduce pollution in the society	0.846		
Your organization is taking initiatives to improve physical health of employees	0.763		
Your organization uses renewable source of energy	0.768		
My organization recognizes business sustainability as an important issue	0.666		
My organization publishes reports on Sustainability initiatives	0.545		
The world's resources and technology is sufficient to support its growing population			0.627
Economics, if led by private sector (not government sector) would better manage sustainability issues			0.832
<i>Extraction Method: Principal Component Analysis</i>			
<i>Rotation Method: Varimax with Kaiser Normalization</i>			
<i>Rotation converged in 4 iterations</i>			

The reliability statistics (Cronbach's Alpha) for all 26 items is 0.78 and for the 16 scale variables is 0.85, which is considered acceptable as per Cronbach's 1951. It was observed that the components with a higher explained variance also indicated a higher reliability statistics. The factor 1 (Organization's concern and contribution to sustainability) indicated the highest explained variance (24%) and the highest reliability statistic (0.86). The factor 2 (Awareness about sustainability) indicated an explained variance (20%) and a reliability statistic (0.79). Thus, the sustainability issues can be reduced (summarized) into three components or factors (see table 4) and these are considered for subsequent regression analysis.

TABLE 4 - FACTORS IDENTIFIED

Factors	Factor Name	Number of Items	Reliability	% of variance
Factor 1	Organization's concern and contribution to sustainability	7	0.86	24
Factor 2	Awareness about sustainability	6	0.79	20
Factor 3	Sufficient resources and private sector confidence (Sustainability optimism)	2	0.53	12

Average scores of the three factors were calculated based on the scores of the underlying variables which were further analyzed using correlation and regression technique. All the three factors were found to be positively correlated (Table 5). Organization's concern and contribution to sustainability was found to be significantly and positively correlated with awareness about sustainability (0.4) and with sustainability resources

& confidence (0.23). Factor 1 was regressed with factor 2 and factor 3 using bivariate and multivariate regressions (Table 6). It is observed that Factor 1 was significantly explained by factor 2 and factor 3, individually and combined (R-squared=19.3%)

TABLE 5 - FACTOR CORRELATIONS (SPEARMAN'S RHO)

	Factor 1	Factor 2	Factor 3
Factor 1	1	0.391**	0.232*
Factor 2	0.391**	1	0.132
Factor 3	0.232*	0.132	1
** Correlation is significant at the 0.01 level (2-tailed).			
* Correlation is significant at the 0.05 level (2-tailed).			

TABLE 6 - REGRESSION RESULTS (DEPENDENT VARIABLE: FACTOR 1)

	R-squared	p-value	coefficient	coefficient
Factor 2	12.4	0	0.37	
Factor 3	9.3	0.002	0.27	
Factor 2	19.3	0	0.34	0.001
Factor 3			0.23	0.005

The two null hypothesis were not accepted based on the correlation and regression analysis. Subsequently, a crosstab analysis was conducted to understand the effect of demographics on sustainability issues in context to the three factors.

Factor 1 and demographics

About 24% of the respondents believe that organization are concerned about sustainability issues and such respondents are willing to pay up to 10% premium while 16% of such respondents are willing to pay more than 10% premium for using sustainable products. About 20% of the respondents are neutral to such analysis. About 34% respondents having income up to 1 million USD believe that organization are concerned about sustainability issues and 11% of the respondents having income more than 1 million USD also believe that organization are concerned about sustainability issues. About 12% of the respondents (who are qualified as graduate or below) believe that organizations are concerned about sustainability issues and 31% of the respondents who are qualified as post graduate/professionals hold such a belief. About 17% respondents who are female believe that organizations are concerned about sustainability issues while 28% male respondents hold such a belief. About 15% respondents who are aged up to 40 years believe that organizations are concerned about sustainability issues while 18% respondents aged 40 years and above are such a believer.

Factor 2 and demographics

About 65% of the respondents are aware about sustainability issues and are willing to pay up to 10% premium for using sustainable products while 11% of such respondents are willing to pay more than 10% premium for such products. About 66% respondents with an annual income up to 1 million USD are aware about sustainability issues while 11% of the respondents with an annual income more than 1 million USD are aware about sustainability issues. About 60% of the respondents are aware about sustainability issues and qualified up to graduate level while this percentage is just 14% for postgraduates/professionals. About 50% of the female respondents are aware about sustainability issues while 28% male respondents are observed to be aware about sustainability issues. About 25% respondents who are aged up to 40 years are aware about sustainability issues while 38% respondents aged 40 years and above are aware about sustainability issues.

Factor 3 and demographics

It was observed that there are 15% respondents who are willing to pay up to 10% premium (and are optimistic about sustainability issues) while there are 14% respondents who are willing to pay more than 10% premium

for using sustainable products. About 26% respondents with an income up to 1 million USD are optimistic about sustainability issues while none of the respondents having income more than 1 million USD are observed as optimistic about sustainability issues. About 21% post graduates/professionally qualified respondents are optimistic in comparison to 6% respondents who are qualified as graduate or below. About 8% female respondents are optimistic about sustainability issues while 11% male respondents are observed as optimistic about such issues. Not age bias was found in optimism regarding sustainability issues as 14% respondents who are 40 years of age or below were observed as optimistic while 15% respondents above 40 years of age were observed as optimistic about sustainability issues.

5. DISCUSSIONS

The primary objective of the study is to understand the environmental sustainability issues and the concerns of individuals in the context of demographic factors with a focus on individual awareness and optimism. It was observed that majority of the respondents (66%) are willing to pay up to 10% premium to use a sustainable product or service and 62% respondents would prefer to work for a sustainable business. This is a positive finding particularly in the context of COVID-19 that the general public is looking forward to sustainable products. Although, the contribution of organizations to environmental and business sustainability was found to be on the lower side as only 46% respondents (with lowest CV of 26%) report that their organization is contributing to sustainability concerns. The policy makers and decisions makers should focus to increase this percentage for mutual benefits. This finding concurs with Haanaes et al., (2011) where they found that only 59% respondents are committed to environmental sustainability and to Blok et al.,(2015) where they found that the leadership support encourage pro-environment behavior in employees.

Using an exploratory factor analysis, the sustainability concerns converged into three factors (Organization's concern and contribution to sustainability; Sustainability awareness; Sustainability optimism). All the three factors were found to be positively correlated amongst themselves implying an interplay and connect amongst them. In regression analysis, it is observed that Factor 1 was significantly explained by factor 2 (R-squared=12.4%) and factor 3 (R-squared=9.3%) and combined (R-squared=19.3%). This implies that organization's concern for sustainability is driven by the awareness and optimism of people in the environment. If the employees, customers and general public are aware and considerate about sustainability issues, it will affect the organization's concern for sustainability (see Sarkis et al., 2010). This finding also conforms to the 'Institutional theory' of sustainability which encourages business by focusing on sustainability concerns.

On studying the relationship between the three factors with the demographic variables, it was observed that about 29% respondents are willing to pay a premium (and are optimistic about sustainability issues) for using sustainable products. On the contrary there are about 41% respondents who do not agree to pay premium for using sustainable products (and are not optimistic). High income respondents were not found optimistic in comparison to low income respondents. Alternatively, more number of respondents who were highly qualified were optimistic (see Asare et al.,2022). More number of males were observed as optimistic about sustainability issues than females while there was no age bias for sustainability optimism. A large number of respondents (76%) who are aware about sustainability issues are willing to pay a premium to use sustainability products (see Li & Kallas, 2021) while a majority of low income respondents (66%) and low qualified respondents (60%) are aware about sustainability issues. Females were found to be more aware about sustainability issues than males while more number of senior respondents (above 40 years of age) were aware about sustainability issues. These findings conforms to Galbreth & Ghosh (2013) on awareness and Li & Kallas (2021) on customer's willingness to pay a premium for environment friendly products. Respondents who were highly qualified were of the belief that the organizations are concerned about sustainability issues whereas the respondent's age was observed as a non-significant factor in this belief.

6. CONCLUSIONS

The objective of the paper is to identify and analyze sustainability concerns based on individual responses during the COVID-19 pandemic with a focus on demographic variables. The study successfully applied exploratory factor analysis and found three important sustainability concerns (Organization's concern and contribution to sustainability; Sustainability awareness; Sustainability optimism). These three factors were

found to be positively correlated amongst themselves and Factor 1 could be significantly explained by factor 2 and factor 3, combined up to 19.3%. A major finding from the study is that an increased level of awareness and optimism will enable the organizations to contribute and care about the environmental and business sustainability. If the employees, customers and general public are aware and considerate about sustainability issues, it will affect the organization's concern for sustainability.

Managerial implications: About 46% respondents agreed that their organization considers environmental sustainability as important. Organizations should strive to increase this percentage for mutual benefit of the business and environment. High income respondents were found to be less optimistic in comparison to low income respondents while 29% optimistic respondents were willing to pay a premium for sustainable products. Additionally, a large number of respondents (76%) who are aware about sustainability issues are willing to pay a premium to use sustainability products. The policy makers and decision makers should include awareness and optimism to plan for environmental and business sustainability. Additionally, the findings from the business impact of demographic variables (age, gender, income, educational qualification) of individuals and their preference for sustainable products should be considered by corporate entities for their business strategy.

Limitations: The research used a non-representative convenience sampling for data collection from the Middle East respondents. Although the data collected is from a particular geographical area but the concerns and issues are relevant to other geographies also. A similar study can be replicated for a larger and more diversified sample for more generalized and robust results.

REFERENCES

- Anderson, L. M. & Bateman, T. S. (2000). Individual environmental initiative, championing natural environmental issues in US business organizations. *Academy of Management Journal*, 43(4), 548-70
- Asare, E.T.; Burton, B. & Dunne, T. (2022), Strategic accountability for sustainability of natural resources – public discharge and optimism in sub-Saharan Africa, *Sustainability Accounting, Management and Policy Journal*,13(2),414-437
- Bansal, P., & Clelland, I. (2004). Talking trash: legitimacy, impression management, and unsystematic risk in the context of the natural environment. *The Academy of Management Journal*, 47 (1), 93-103.
- Blok,V., Wesseling,R., Studynka,O. & Kemp,R. (2015), Encouraging sustainability in the workplace: a survey on the pro-environmental behaviour of university employees, *Journal of Cleaner Production*,106(1),55-67
- Callens, I. & Tyteca, D. (1999). Towards indicators of sustainable development for firms: A productive efficiency perspective. *Ecological Economics*, 28(1),41-53
- Carberry,E.J.; Peter-Jan Engelen & Essen,M.V.(2018). Which firms get punished for unethical behavior? Explaining variation in stock market reactions to corporate misconduct, *Business ethics quarterly*,28(2),119-151
- Ciocirlan, C. E. (2017). Environmental workplace behaviors, Definition matter. *Organization & Environment*, 30(1), 51-70.
- Cordeiro, J.J. & Sarkis, J. (2008). Does explicit contracting effectively link CEO compensation to environmental performance?, *Business Strategy and Environment*, 17 (5), 304-17
- Cronbach, L.J.(1951).Coefficient alpha and the internal structure of tests. *Psychometrika*, 16,297–334
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance, *Management Science*, 60(11),2835-2857.
- Esty, D.C., & Winston, A.S. (2009). Green to gold: How smart companies use environmental strategy to innovate, create value, and build competitive advantage. Hoboken, NJ: Wiley
- Etzion, D. (2007). Research on Organizations and the Natural Environment, 1992-Present: A Review, *Journal of Management*, 33(4),637-664.

- Galbreth, M.R. & Ghosh, B. (2013). Competition and Sustainability: The Impact of Consumer Awareness. *Decision Sciences*, 44(1), 127-159
- Gerged, A.M., Cowton, C.J., & Beddewela, E.S. (2018). Towards sustainable development in the Arab MENA region: a longitudinal analysis of environmental disclosure in corporate annual reports, *Business Strategy and the Environment*, 27(4), 572-587
- Glover, J.L., Champion, D., Daniels, K.J., & Dainty, A.J.D. (2014). An Institutional Theory perspective on sustainable practices across the dairy supply chain, *International Journal of Production Economics*, 152, 102-111
- Haanaes, K., Arthur, D., Balagopal, B., Kong, M. T., Reeves, M., Velken, I., & Kruschwitz, N. (2011). Sustainability: the embracers seize advantage, *MIT Sloan Management Review*, available at <https://sloanreview.mit.edu/article/new-sustainability-study-the-embracers-seize-advantage/>
- Haanaes, K., Arthur, D., Balagopal, B., Kong, M., Reeves, M., Velken, I., Hopkins, M. & Kruschwitz, N. (2011), New sustainability study: the 'embracers' seize advantage, *MIT Sloan Management Review*, 52(3), 23-35
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial least squares: the better approach to structural equation modeling?. *Long range planning*, 45(5-6), 312-319.
- Ismaeel, M. & Zakaria, Z. (2019). Perception of preparers of sustainability reports in the Middle East: Contrasting between local and global, *Meditari Accountancy Research*, 28(1), 89-116
- Kamboj, S. & Matharu, M. (2021). Modelling the predictors of consumers' willingness to pay premium price for sustainable products. *Journal of Asia Business Studies*, 15(4), 559-583
- Kollmuss, A. & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior. *Environmental education research*, 8(3), 239-60.
- Kumar, K. & Prakash, A. (2019). Examination of sustainability reporting practices in Indian banking sector, *Asian Journal of Sustainability and Social Responsibility*, 4(1), 1-16
- Li, S. & Kallas, Z. (2021). Meta-analysis of consumers' willingness to pay for sustainable food products, *Appetite*, 163, 105239
- Lu, Y., Nakicenovic, N., Visbeck, M., & Stevance, A.S. (2015). Policy: Five priorities for the UN sustainable development goals—comment. *Nature*, 520(7548), 432– 433.
- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample Size in Factor Analysis. *Psychological Methods*, 4, 84-99.
- Millar, C.; Hind, P., & Magala, S. (2012). Sustainability and the need for change: organisational change and transformational vision. *Journal of Organizational Change Management*, 25(4), 489-500.
- Proops, L.R.J., Atkinson, G., Scholthuis, B.F. & Simon, S. (1999). International Trade and the Sustainability Footprint: Practical criterion for its assessment. *Ecological Economics*, 28(1), 75-97
- Ramus, C. A. & Steger, U. (2000). The roles of supervisory support behaviors and environmental policy in employee eco-initiatives at leading-edge European companies. *Academy of Management Journal*, 43(4), 605-26.
- Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2010). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. *Journal of Operations Management*, 28:163–176
- Whetten, D.A., Rands, G. & Godfrey, P. (2002). What are the responsibilities of business to society? In *Handbook of Strategy and Management*, edited by A.M. Pettigrew, T. Howard & R. Whittington, Sage, London: 373–409.