

# Individuals and Organizations: The Sustainability Connect

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## Abstract

An individual's concern for sustainability and an organization's concern for sustainability are interrelated and is imperative considering the significance of environmental and business sustainability to future organizations. The objective of the research is to understand more about the interrelationship between these two concerns. This relationship is studied under the influence of five demographic variables (Age, gender, employment type, educational qualification and income) and considering the preference for self-interest over common interest. The organization's concern for sustainability and an individual's concern for sustainability were found to significantly explain each other. The demographic variables were also found to significantly explain these two concerns.

The research is based on a survey instrument and the findings contribute new dimensions to the existing literature on the subject.

**Keywords:** environmental sustainability, business sustainability, demographics, Middle East

## 1. Introduction

People, planet, prosperity, peace, partnership are the 5 Ps from the preamble of Sustainability Development Goals (SDGs) as adopted in September 2015. Earth is a common asset for all living beings, with limited resources. We need to maintain it and try to sustain it as long as possible. Sustainability as a concept is understood as sustaining the environment which also includes sustainable business as a subset of itself. The importance of sustainability is increasing as businesses become more conscious of their carbon footprint on the environment in which they operate.

There have been many studies addressing the need for incorporating sustainability into core business strategies (Dyllick & Hockerts 2002; Salzmann et al., 2005; Weber et al., 2008). Over the past few decades organizations have come under increasing economic, political and social pressure to address ecological problems and improve their environmental performance (Sarkis et al., 2010). Business leaders are also recognizing the significant opportunities for their organizations in pursuing improved environmental sustainability, both in terms of their reputation and long term competitive advantage (Etzion, 2007; Millar et al., 2012). Many organizations are aligning environmental sustainability to their overall corporate strategy (Esty & Winston, 2009). The focus on environmentally sustainable practices has continued to advance, despite economic downturns and recoveries (Eccles et al., 2014; Haanaes et al., 2011).

### *1.1 Development of Policy for Global Sustainability*

The policy framework for sustainability has developed over the time and the chronology for the same is summarized in this segment. The United Nations Framework Convention on Climate Change (UNFCCC) came into force on March 21, 1994 where almost all countries (197 in all) across the globe became a member. These 197 countries are called parties to this 'Rio Convention'. The UNFCCC based itself on one of the most successful multilateral environmental treaties in history (the Montreal Protocol of 1987) which bounded its member states to act in the interests of human safety even in the face of scientific uncertainty. The Kyoto Protocol was adopted on December 11, 1997 which operationalizes the UNFCCC by committing industrialized countries to limit and reduce greenhouse gases emissions in accordance with agreed individual targets. The 'Paris Agreement' builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat

climate change. The Paris Agreement aims to strengthen the global response to the threat of climate change by keeping a global

temperature rise this century well below 2 degrees Celsius above pre-industrial levels. To reach these ambitious goals, appropriate financial flows, new technologies and enhanced capacity building framework are put in place. The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries in September, 2000. The seventeen sustainable Development Goals (SDGs) and 169 relevant targets, adopted by UNGA in 2015, were a major step ahead in the road to sustainability. In order to make policy happen, the dependencies among the goals in terms of potential interactions need to be evaluated, both across (Lu et al., 2015) and within the SDGs (Schmidt et al., 2015).

Institutional theory (or legitimacy theory) explains the motivations for corporate boards in demonstrating their concern for environmental performance of the firm. This theory suggests that companies behave in a socially responsible way in order to maintain legitimacy in the eyes of society. The benefits of doing so include greater acceptance for products and services, better access to financial capital, improved ability to attract human resource talent, and harmonious relationships with contingent communities and society at large (Bansal & Clelland, 2004; Delmas & Toffel, 2007; Cordeiro & Sarkis, 2008).

## 2. Literature Review

The significance of sustainability to business and vice versa has been discussed and debated. Initially (in 1960s) in the form of corporate social responsibility (CSR) and later (1990 onwards) in the form of sustainability concerns and disclosures, the arguments for business sustainability include improved branding, employee recruitment and retention (Whetten et al., 2002). Alternatively, (McWilliams & Siegel (2001) found no significant relationship between social performance of a firm and its financial performance.

Callens & Daniel (1999) suggest that firms should play an important role in the attainment of sustainability goals due to their central role in human activities and development. Proops et al. (1999) found a simple and minimal criteria for sustainability, that is 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 across SDGs for countries based on correlations of variables within SDGs. Eccles et al. (2014) demonstrated that firms with a focus on sustainability significantly outperform their counterparts 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. Böhringer & Jochem (2007) surveyed sustainability indices and found that these indices are not much useful for policy implications. Frost et al. (2008) surveyed the sustainable reporting practices of companies and found that the accounting reporting did not include sufficient information on sustainable reporting but additional reports and website included better information and that overall disclosure levels were low. Merlin Tao (2002) surveyed sustainability reporting for South African companies and found that 57% of the top companies are reporting on sustainability.

Pro-environmental behaviour may contribute towards organizational plan to preserve natural resources and the environment (Anderson & Bateman, 2000). The survey by Renate et al., (2015) focuses exclusively on pro-environmental behaviour of employees in the workplace and found that the theory of planned behaviour can explain pro-environmental behaviour in the workplace. The results show that there are clear differences between factors influencing pro-environmental behaviour in households and in the workplace. Furthermore, also other factors like leadership support and exemplary pro-environmental behaviour by leaders have a significant positive impact on employee's intention to act pro-environmentally. Besides that, 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. Kollmuss & Agyeman (2002) refers pro-environmental behaviour as a cautious action that seeks to minimize the undesirable impact on the environment. Ramus & Killmer (2007) define 'corporate greening' as one of their dependent variable representing the changes in organizational practices to more environmentally sound ones. Ciocirlan (2017) used the term 'green employee' in her research that described green employee has an environmental identity, an intrinsic motivation to protect the environment through work, and aims for consistency between home and work environmental behaviors. Kumar & Prakash (2019) found that there is a significant difference in the disclosure of environmental and internal socio-environmental indicators between public and private sector banks in India.

Some other sustainability concerns, identified earlier, are alignment in climate change adaptation and mitigation response (Smith & Olesen, 2010); poverty alleviation (Mathy & Blanchard, 2016); meeting the millennium

development goals (MDGs) (Bue & Klasen, 2013); and balancing economic development, environmental sustainability, and social inclusion for human well-being (Ibisch et al., 2016).

This research is focused on the inter relationship between an individual's concern and an organization's concern for sustainability. This relationship becomes significant considering the increasing role of organizations to the cause of environmental and business sustainability (Salzmann et al., 2005; Weber et al., 2008) and thus needs to be probed further. 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. Although there are few studies found unrelated themes (Gerged et al., (2018) studied environmental disclosure in Middle East and North Africa countries while Ismaeel & Zakaria studied sustainability reporting), there are hardly any previous studies on the interrelationship between Osus and Isus and this novel study aims to add to the existing literature.

### 3. Research Methodology

The objective of the research is to understand the interrelationship between an organization's concern (Osus) and an individual's employee/professional's concern (Isus) for environmental and business sustainability. This relationship is studied under the influence of five demographic variables (Age, gender, employment type, educational qualification and income). An additional concern for sustainability is 'own interest exceeds common interest', referred as 'OI' in the research. This variable is also used as a mediating variable on the relationship between the organization's and the individual's concern for sustainability. The research is based on the premise that an individual may influence an organization to be serious about environmental and business sustainability and vice versa. Similar variables were studied in [Renate et al., (2015); Kumar & Prakash (2019); Ramus & Killmer (2007); Ciocirlan (2017)]. In the research the concept of sustainability includes environmental sustainability as well as business sustainability unless otherwise indicated specifically.

The institutional theory of sustainability (see Glover et al., 2014) also explains an organization's concern for environmental and business sustainability. This variable has also been studied by [Bansal & Clelland, 2004; Delmas & Toffel, 2007; Cordeiro & Sarkis, 2008].

The research uses 'Isus' as a study variable representing an individual employee/professional's concern for environmental and business sustainability. The organization's concern for environmental and business sustainability (Osus) and an individual's concern for environmental and business sustainability (Isus) was calculated as an average score for seven related questions, respectively. Renate et al., (2015) were one of the first to study the pro-environmental behaviour in the workplace for employees.

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 the finalized questionnaire included 26 questions. These 26 questions included five questions on demographics, three questions as 'Yes/No' type, two multiple choice questions and 16 questions based on a Likert's scale of 1 (strongly disagree) to 5 (strongly agree). About 102 usable responses were received by administering the survey (online due to COVID-19 protocol) during the time period December, 2020 to February, 2021. The Cronbach's Alpha value of the instrument's reliability was observed as 0.78, which was found acceptable according to Cronbach (1951).

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 mediation analysis is used as the anchor analytical techniques. The mediation analysis (see Baron & Kenny, 1986) is conducted to understand the effect of the OI on the interrelationship between Osus and Isus. Sarkis et al., (2010) used mediating technique in a similar study.

A 'mediator' variable is expected to explain (mediate) the relationship between an independent variable (IV) and a dependent variable (DV). The methodology of this technique is based on regression analysis where equations 1.1; 1.2 and 1.3 should be significant as a pre-condition for mediation analysis as per equation 1.

$$\text{Dependent variable} = \text{Constant} + \alpha^1 * \text{Independent variable} + \gamma^1 * \text{Mediating variable} \quad (1)$$

$$\text{Dependent variable} = \text{Constant} + \alpha * \text{Independent variable} \quad (1.1)$$

$$\text{Mediating variable} = \text{Constant} + \beta * \text{Independent variable} + \gamma^1 * \quad (1.2)$$

$$\text{Dependent variable} = \text{Constant} + \gamma * \text{Mediating variable} \quad (1.3)$$

If in equation 1,  $\gamma^1$  is found significant while  $\alpha^1$  becomes insignificant, then mediation is taking place. Also, if  $\alpha^1 < \alpha$  or if  $\alpha^1 = 0$ , then partial mediation or full mediation is observed. The mediation effects are numerically calculated as follows:

$$\text{Total effect (for single or multivariable mediation)} = \alpha \quad \dots(2.1)$$

$$\text{Total mediating effect} = \alpha - \alpha^1 \quad \dots(2.2)$$

$$\text{Proportion mediated} = \text{Total mediating effect} / \text{Total effect} = (\alpha - \alpha^1) / \alpha \quad \dots(2.3)$$

Table 1. Elaborates on the study variables used

Sl.No.	Variable	Code	Nature of variable
1	Age of the respondent	Age	Binary
2	Gender of the respondent	Gender	Binary
3	Employment type of the respondent	Etype	Binary
4	Educational qualification of the respondent	Qualification	Binary
5	Income of the respondent	Income	Binary
6	Own interest exceeds common interest	OI	Likert's scale of 1 to 5
7	Organization's concern for sustainability	Osus	Likert's scale of 1 to 5
8	Individual's concern for sustainability	Isus	Likert's scale of 1 to 5

#### 4. Data Analysis and Findings

Initially, descriptive variables were analyzed. 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.

Considering the awareness levels about sustainability issues, 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 sustainability 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 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 respondents were also asked to indicate one important sustainability issue or concern as the top priority. The results are listed in table 2.

Table 2. Top priority sustainability issue

Sustainability concern	Respondents (%)
Climate change	11.8
Poverty	16.7
Education	45.1
Biodiversity	5.9
Green initiatives	18.6
Other	2
Total	100

The table 3 and table 4, indicate the multivariate regression results with *Isus* and *Osus* as the dependent variables, respectively. Five demographic variables (Age, gender, employment type, qualification and income) have been used as dummy explanatory variables to understand their effect on the interrelationship between *Isus* and *Osus*. All the regressions in table 3 and table 4 were found statistically significant with R-squared values ranging from 12% to 18%. Employmenttype was found to have a negative and significant coefficient with *Isus* and *Osus* as dependent variables, respectively. Gender ( $r=0.18, p\text{-value}=0.001$ ) and educational qualification ( $r=0.24, p\text{-value}=0.009$ ) was found positive and significant with *Isus* but insignificant with *Osus*. Income was found positive and significant ( $r=0.46, p\text{-value}=0.04$ ) with *Osus* but insignificant with *Isus*.

Table 3. Multi-variate regression results (Dependent variable: *Isus*)

Dependent variable: <i>Isus</i>				
Independent variables	Coefficients	p-value	p-value	R-squared(%)
<i>Osus</i>	0.19	0.001		
Age	-0.03	0.76	0.002	12
Constant	2.11	0		
Dependent variable: <i>Isus</i>				
Independent variables	Coefficients	p-value	p-value	R-squared(%)
<i>Osus</i>	0.18	0		
Gender	0.18	0.001	0	15
Constant	2.03	0.049		
Dependent variable: <i>Isus</i>				
Independent variables	Coefficients	p-value	p-value	R-squared(%)
<i>Osus</i>	0.17	0		
Etype	-0.21	0.003	0.001	14
Constant	2.19	0.15		
Dependent variable: <i>Isus</i>				
Independent variables	Coefficients	p-value	p-value	R-squared(%)
<i>Osus</i>	0.18	0.001		
Qualification	0.24	0.009	0	18
Constant	1.95	0		
Dependent variable: <i>Isus</i>				
Independent variables	Coefficients	p-value	p-value	R-squared(%)
<i>Osus</i>	0.19	0.001		
Income	0.054	0.68	0.002	12
Constant	2.1	0		

Table 4. Multi-variate regression results (Dependent variable: Osus)

Dependent variable: Osus				
Independentvariables	Coefficients	p-value	p-value	R-squared(%)
Isus	0.59	0.001		
Age	-0.197	0.19	0.001	13
Constant	1.54	0.001		
Dependent variable: Osus				
Independentvariables	Coefficients	p-value	p-value	R-squared(%)
Isus	0.56	0.001		
Gender	0.14	0.38	0.001	12.4
Constant	1.41	0.003		
Dependent variable: Osus				
Independentvariables	Coefficients	p-value	p-value	R-squared(%)
Isus	0.52	0.003		
Etype	-0.63	0.016	0	16.7
Constant	1.71	0		
Dependent variable: Osus				
Independentvariables	Coefficients	p-value	p-value	R-squared(%)
Isus	0.61	0.001		
Qualification	0.009	0.96	0.002	11.7
Constant	1.4	0.003		
Dependent variable: Osus				
Independentvariables	Coefficients	p-value	p-value	R-squared(%)
Isus	0.57	0.001		
Income	0.46	0.04	0	15.4
Constant	1.44	0.002		

Table 5. Bivariate regressions results

Dependent variable: Isus			
	R-squared (%)	p-value	coefficient
<i>Osus</i>	12	0	0.2
<i>OI</i>	15	0	0.16
Dependent variable: Osus			
<i>OI</i>	14.4	0	0.27
<i>Isus</i>	12	0	0.61
Dependent variable: Own interest			
<i>Osus</i>	14	0	0.53
<i>Isus</i>	15	0	0.97

The linear regressions (table 5) amongst *Osus*, *Isus* and *OI* were found statistically significant with explained variance in the range of 12% to 15%. Subsequently, a mediation analysis was conducted (see table 6) where *OI* was found to moderate the bi-directional relationship between *Isus* (35% mediation) and *Osus* (34% mediation).

Table 6. Results from mediation analysis

Dependent variable: Isus					
	R-squared(%)	p-value	coefficient	p-value	Total proportion Mediated (%)
Osus	20	0	0.13	0.02	35
OI			0.12	0.003	
Dependent variable: Osus					
Isus	19	0	0.41	0.02	34
OI			0.21	0.004	

## 5. Discussion

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. Additionally, 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. However, the awareness and preference percentage for sustainability issues should increase in times to come. Also, the contribution of organizations to environmental and business sustainability was also found on the lower side as only 46% respondents (with lowest CV of 26%) indicate their organization considers environmental sustainability as important while only 43% were unsure if their organization is reducing pollution in the society. Haanaes et al., (2011) found that only 59% respondents are committed to environmental sustainability. Blok et al., (2015) also found that leadership support encourage pro-environment behavior in employees. Within the umbrella of sustainability 45% respondents rated education as the top priority concern followed by green initiatives (see table 2). Organizations concern for sustainability and individuals concern for sustainability were found to explain each. 'Own interest exceeds common interest (OI)' as an independent variable was also found to significantly explain Osus (R-squared=14%) and Isus (R-squared=15%). This indicates that an individual's concern for sustainability translates into the organization's concern for sustainability and vice versa. Perhaps, this concern can be addressed by more creating more awareness amongst employees by organizations (see Callens & Daniel (1999). Employees will have to shun individual interests and concerns in the favor of common interests and concern if the cause of sustainability is to be taken seriously. Additionally, OI was found to moderate the bi-directional relationship between Isus (35% mediation) and Osus (34% mediation).

Five demographic variables (Age, gender, employment type, qualification and income) have been as a dummy explanatory variable to understand their effect on the interrelationship between Isus and Osus. All the related regressions were found statistically significant with R-squared values ranging from 12% to 18% indicating that such demographic variables also have their influence on an individual's and an organization's concern for sustainability.

Etype was found to have a negative and significant coefficient with Isus and Osus as dependent variables, respectively, indicating that if employment changes from private sector to government sector, there is a reduction in concern for sustainability. Gender ( $r=0.18, p\text{-value}=0.001$ ) and educational qualification ( $r=0.24, p\text{-value}=0.009$ ) were found positive and significant with Isus indicating that male gender has more concern for sustainability and that people who are more educated (postgraduate or above) have more concern for sustainability. Additionally, income was found positive and significant ( $r=0.46, p\text{-value}=0.04$ ) with Osus indicating a direct relationship between income of employees and their organization's concern for sustainability.

## 6. Conclusion

The objective of this research was to study the relationship between an individual's concern for sustainability (Isus) and an organization's concern for sustainability (Osus) along with the variables which affect this relationship. Thus, linear regressions using dummy demographic variables and mediation analysis was conducted to probe more about the relationship between Isus and Osus. Based on the analysis in the research, it can be deduced that an organization's concern for sustainability and an individual's concern for sustainability were found to significantly explain each other. It was also found that for sustainability one of the main challenge is the influence of the variable 'individual interests exceed common goals and interests (OI)'. This was validated by the findings of the research

as OI was found to significantly explain Osus (R-squared=14%) and Isus (R-squared=15%). Additionally, OI was found to moderate the bi-directional relationship between Isus (35% mediation) and Osus (34% mediation).

All the five demographic variables (Age, gender, employment type, qualification and income) were found statistically significant with R-squared values ranging from 12% to 18% indicating that such demographic variables also have their influence on an individual's (Isus) and an organization's (Osus) concern for sustainability. Etype was found to have a negative and significant coefficient with Isus and Osus. Gender and educational qualification were found positive and significant with Isus. Income was found positive and significant with Osus. 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. In spite of these encouraging findings the awareness about related sustainability issues is on the lower side and needs to be pushed up. The significance of awareness and education was further supported with the finding that 45% respondents rated education as the top priority concern amongst sustainability issues followed by green initiatives.

### 6.1 Managerial Implications

The organizations need to work on reducing the OI factor and sensitize its employees about the importance of common resources and benefits from sustainability. Employees concern for sustainability and organization's concern for sustainability affect each other. The recruiters and policy makers need to consider this finding. Additionally, employment type, gender, educational qualifications and income levels of individuals should be considered in policy formulation and decision making regarding sustainability issues.

*Limitations:* The research uses 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 findings are relevant to other geographies. Being a novel study, the results are suggestive but not definitive. A similar study can be replicated for a larger and more diversified sample for more general results.

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