# Measuring Sustainable Ecocentric Views of Young Entrepreneurs with NEP Scale - A Way Forward to Oman 2040 vision

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#### Abstract

Oman's vision 2040 focuses on four main pillars of People, Economy, Institutions and Environment. Every nation's economy greatly benefits from its environment, both directly and indirectly. Direct usage is through its use in manufacturing and indirect usage is through the myriad of services it offers. In recent decades, the nature of the environmental concerns facing the world has undergone a major shift. The best defense to sustain the environment is to instill awareness among the youth. This research attempted to initiate this defense mechanism through an assessment of environmental paradigms among budding Omani entrepreneurs. Researchers adopted an area sampling design to select respondents from designated food service-sectors. Data collection was administered through a structured questionnaire using NEP scale focused on five facets such as Reality of Limits to Growth, Anti-anthropocentrism, Fragility of Nature's Balance, Rejection of Exemptionalism and Possibility of an Eco-Crisis. The analysis included Descriptive statistics, student's t test, ANOVA and multiple comparison using Tukey HSD test that revealed the impact of respondents' gender, type of business and location on environmental paradigms to comprehend creative entrepreneurs' willingness to sustain natural resources in support of Oman's Vision 2040.

Keywords: Ecocentric views; Young Entrepreneurs; NEP scale; Sustainable Development (SD); Oman Vision 2040

#### 1. Introduction

The Sultanate aspires to become a developed country by making use of competitive advantages in view of its Vision towards 2040. Oman's vision 2040 focus on four main pillars, which are People, Economy, Institutions and Environment which emphasis on natural resources and environment of the country. Vision 2040 is therefore considered to be the outline of the country's future developments and it is imperative that all the citizens, residents, organizations together familiarize themselves to the objectives of the vision and contribute their maximum (Oman Vision 2040 - a Starter Strategy Guide, 2021). Its main aim is to achieve comprehensive and sustainable development, based on innovations and responsive changes together with actively contributing to global trade. It enforces the belief of optimum and balanced use of natural resources as well as the protection of the environment. This is taken as one of the national priorities, based on the strategic direction in developing ecological systems that are effective, balanced, and flexible. This change, in turn, can focus on the protection of the environment and

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sustenance of its natural resources in support of the national economy. The main goals are to protect natural resources and to encourage maximum investment in them to deliver high value. This strategy will ensure the adoption of a green economy that would be expressed in infrastructure projects and renewable energy resources. These reforms will create a better-diversified source of revenue for the Sultanate.

The New Ecological Paradigm [NEP] is a widely accepted, reliable multiple scale, for capturing an individual's environmental attitudes or behavior. The revised NEP (Dunlap & Jones, 2002; Amburgey & Thoman, 2012) is the most widely accepted measure of environmental attitudes worldwide. The current research intends to use the NEP scale to understand Oman's progress in terms of ecological sustainability. The revised NEP scale will identify two dimensions in considering the emerging ecocentric system. It's identified as (1) Dominant Social Paradigm [DSP] (even numbered items in the scale), wherein humans are regarded as self-sufficient and superior to other organisms in nature and (2) New Environmental Paradigm [NEP] (odd numbered items in the scale) in which humans are viewed as a part of natural systems and as a result they are very much self-conscious. It's evident in some studies (Putrawan, 2015) regarding the exploitation nature of human beings as they think that the environment can recover by itself. Therefore, it is interpreted that nature's unlimited resources can be widely used to meet human requirements. NEP (ecocentric approach) argues that humans are closely intertwined to the ecosystem. Natural resources are finite, and they must be managed carefully. As it is closely interconnected, the destruction of one component can cause the deterioration of the eco system. The revised NEP scale consists of 15 items, in which agreement towards eight-odd numbered items (scale items 1,3,5,7,9,11,13 and 15) and disagreement with the seven even-numbered (scale items 2,4,6, 8,10,12 and 14) items indicate pro-NEP responses. It is an important goal to be achieved in view of managing traditional resources as well as balancing the developmental requirements. Researchers believe that understanding sustainability should start with budding entrepreneurs. Vision 2040 initiatives inspires Omani youth to become more entrepreneurial. They can be empowered to be more competitive and globally unique to offer specialized products or services that foster socio-economic prosperity in rural and urban communities. Considering the previous theoretical background of NEP and Sustainable Development (SD), this research aims to answer some prominent questions, viz, is it necessary to maximize the use and sustainability of natural resources by the startups in the Sultanate of Oman? What is the behavior or attitude of budding entrepreneurs towards environmental sustainability? Are they ready to sustain natural resources in support of Oman's economy?

In the light of the above, the main research direction of the current study is to use the revised NEP scale to assess the environmental Paradigms among budding Omani entrepreneurs by assessing the influence of five NEP facets on aspiring entrepreneurs. It also aims to determine the impact of gender, type of business and location on environmental paradigms, as well as to comprehend creative entrepreneurs' willingness to sustain natural resources in support of Oman's Vision 2040. This research article is further classified as sections to discuss the literature background, research methodology, analysis, discussion and scope for the future research.

## 2. Literature background of the New Ecological Paradigm (NEP) and Sustainable Development (SD)

The premeditated approach towards the Oman vision 2040 is grounded on effective, balanced, and buoyant ecosystems that safeguard the environment and sustain its natural resources in support of the national economy. Young budding entrepreneurs are one of the means of achieving an environmentally sustainable economy for the country. Readiness to adapt to a sustainable environment among young entrepreneurs depends on their ability to find various environmental opportunities and make use of their capabilities based on the available resources. It is highly influenced by the attitude of the young entrepreneurs towards social values, social welfare etc. (Zulfiqar et al., 2019). Sustainable Development [SD] tools are normally built around the three important dimensions such as environment, economy, and society. New Ecological Paradigm [NEP] is considered as one of the best tools to measure the interests, attitudes and beliefs towards environmental awareness and sustainability Development. Without studying attitudes, the influence of environmental concerns towards the green movement becomes insignificant. The so called "attitudes" should be understood from its core level and is possible only if the current research study focuses on the country's youth. A better attitude shows better energy saving consumption behavior. A positive attitude would nurture the willingness to pay (WTP) for environmental improvement. If the environmental concerns are low, people in general may not be concerned about it at all. To know their attitudes, it is highly advisable to measure four requirements such as time, action, context, and target (Khaola, Potiane, & Mokhethi, 2014).

Another research introduced the four important constructs in developing a SD tool that should include Environment, Economy, Society and Education (Biasutti & Frate, 2017). The topics that can be considered with reference to Environment include natural resources, climate change, rural development, sustainable urbanization, disaster prevention and mitigation. It identified the relationship between SD attitudes and behavior and reports the concerns about the reflected changes and its impact on pro-sustainability behavior. Putrawan (2015) emphasized that the goal of SD can be well- achieved by reducing DSP - driven (Dominant Social Paradigm) vision in favor of positively related NEP-driven (New Environmental Paradigm) image. Environmentally conscious behavior from the side of the entrepreneurs is much needed as today's consumers are increasingly becoming aware of environmental deterioration that happens using certain harmful products. So, the consumer's awareness about environmental deterioration forces the entrepreneurs to be transparent enough in their sustainability efforts which thereby creates a positive impact on environmental concerns. (Chun et al., 2021)

Five early entrepreneurs from food industry in Malaysia were studied on their readiness of embracing the environmental sustainability and perspectives on sustainable business. It revealed that though there is no evidence that small businesses harm natural resources, they can build sustainability as a foundation to mix with local culture. The entrepreneur will try avoiding environmental impact i.e., he will be ready for environmental sustainability when he is influenced by a driving force to minimize pollution and waste from his business operations. He would eventually understand that being environmentally sustainable results in reduced costs and risks for his business which contributes to corporate gains. From the

five, two entrepreneurs had an opinion that accepting environmental sustainability will incur higher expenses and less profit. It is a commitment from their side which would increase their costs. The other entrepreneurs, on the contrary, are of the opinion that it helps them increase sales and marketing. It is understood that their preparedness to accept sustainability depends on the background on how their business was developed (Basuki, 2020). In Pakistan 347 SME entrepreneurs were surveyed to understand the factors that prompt them to adopt sustainable business. The factors researched were environmental, behavioral, human relations and business factors. Among them, the environmental factors were grouped into environmental sustainability, social awareness, environmental regulations, and policies. It was proved that there is a positive and meaningful relationship between an entrepreneur's intention and environmental surroundings which in due course leads to acceptance of sustainability (Abdelwahed et al., 2022).

There is a significant debate over the NEP scale items' cross-cultural applicability for predicting environmental attitudes and behaviors (Kopnina, 2011; Erdogan, 2009). Its applicability was proved where the NEP scale is tested among Dutch school children aged 10 to 12 through a qualitative approach. The study put forth the findings of the focus group interviews in a compiled and detailed manner. This research further calls for an indepth ethnographic analysis of the socio-cultural framework where youngsters could be explored to express their views regarding the role of social, political, and institutional factors in generating environmental attitudes. The NEP scale is widely used to examine the relationship between demographic characteristics and perceptions as well (AL-Mutairi, 2021). A study conducted on the farmers in England supports the notion that the young and new entrants to farming are entrepreneurial, innovative, and open to change. The farmers who fall between the age of 35 and 45 indicated higher levels of commitment to the agri -environmental schemes. They validated the willingness to embrace environmentally friendly farming practices. Albeit the greening requirements remaining one of the norms to be met by the young entrepreneurs who enter the field of business nowadays, it is still unclear whether they do this rationally in quest of profit motive or is it simply an ideological position (Hamilton et al., 2015).

On the contrary, results of a research on thirty-six Philippine entrepreneurs showed an inclination towards incorporating environmental initiatives among the entrepreneurs with higher asset size, professionalism and age leading to a better environmental performance. A young entrepreneur with smaller asset size was not seen significantly willing for implementing environmentally sustainable measures in his business. The researchers, however, urged the government of the country to equip the entrepreneurs with courses and seminars which would help them attain professionalism and contribute towards an environmentally sustainable initiative from the entrepreneurs (Rao, 2008). Most such studies are likely to aid policy makers in public awareness about environmental challenges as it helps to boost eco-friendly behavior. According to researchers, 15 scaled NEP can be used in various socio-cultural settings as it is noted as a consistent measuring device. It was applied in GCC scenarios which focused on students' attitudes towards the environment, degree of environmental knowledge, involvement, and task orientation. But some other researchers (Bastaman, 2020) reported that the use of NEP scale could not establish a clear link between environmental consciousness and environmental concerns.

Sustainability oriented entrepreneurs tend to exhibit the readiness to implement sustainability related initiatives and believe in incorporating environmental and societal considerations in their respective business activities. A study done on the Malaysian SMEs reveals that there is no significant evidence that proves the noteworthy relationship between the sustainable entrepreneurship and entrepreneurial bricolage which is the use of resources at hand by the entrepreneurs without considering the limitations of their environments. Since there is no significant evidence of this, a sustainability-oriented entrepreneur can be prepared to use the environmental resources with consideration of its limitations (Hooi et al., 2016). Many researchers have also noted and recognized the negative impact of using measures of Environmental Attitude (EA) on research in many fields. According to psychometric research, using scales in an inconsistent manner can pose problems. A minor modification in the scale by phrasing any single item can also significantly affect how people respond to the scale (Robinson, Shaver, & Wrightsman, 1991; Erdogan, 2009). A meta-analysis study conducted (Hawcroft & Milfont, 2010) on NEP scale which reviewed 69 studies from 36 countries suggested NEP as a standardized measure of EA. It also urged to ensure the measurements to deliver dependable and accurate EA scores as the environmental challenges are becoming more significant. Several strategies for gauging environmental attitudes have been used in many studies based on EA. Many surveys were developed using theoretical approaches based on models such as Ecological Values and the NEP.

Being a widely used scale, NEP consists of five dimensions, balance of nature, eco-crisis, anti- exemptionalism, limits to growth and anti – anthropocentrism (known as human domination) (Dunlap & Jones, 2002; Kopnina, 2011; Alibeli & Nair, 2021). Balance of nature is the awareness that human activity affects nature's balance. Eco-crisis explains the belief that humans cause harm to the environment. Anti-exemptionalism proposes that humans are only subject to constraints of nature. Limits to growth is a warning that the earth has limited resources and finally anti-anthropocentrism believes in the concept that human beings have the right to modify and control the environment. Many studies assured the adoption of these dimensions as exceptionally reliable measurement scales (Al Sanie & Al Kandari, 2018; Kopnina, 2011). NEP can be a good starting point for gaining a better knowledge of environmental attitudes. Qualitative studies can further strengthen crosscultural contextual studies by phrasing NEP items which would result in a better and clearer response.

#### 3. Research design

In response to the environmental transition all over the world, the current research study intends to know the eco centric views of budding entrepreneurs. The selected research area is one of the prominent Gulf Cooperation Council (GCC) countries, the Sultanate of Oman. A multi-stage random sampling design is adopted as it is easier to administer when the sampling frame is developed under partial units. This is considered as a development of the principle of cluster sampling, a method of probability sampling. As the clusters happened to be geographic subdivisions, it is better to term the type as 'area sampling' in this research. The first stage is to select large sampling units such as governorates in Oman. Then, the next stage is to concentrate on the selection of wilayats

in which the budding young entrepreneurs are chosen as sampling units. The Governorates selected for the study include North - South Batinah and Muscat and include the wilayats of Suwaiq, Khaboura, Rustaq, Barka, Al-Musannah, Bawsher, Muttrah and Seeb from Al Batinah North, Al Batinah South and Muscat governorates, respectively. As the research is concerned with describing the ecocentric views of budding entrepreneurs, the category of research design is established as descriptive. The study involved 150 young entrepreneurs from various sectors of the food service industry among two major governorates in Oman Such as Muscat, North and South Al Batinah. As per the data from National Centre for Statistics and Information (Arabian Business, 2021), there was a marked increase in the number of start-ups in which Muscat Governorate topped the list; followed by North Al Batinah. Among the 150 questionnaires distributed, 129 were returned and completed, resulted in 86% usable response. Data collection was administered through a structured questionnaire using NEP scale from food service-based entrepreneurs. The current research followed a mixed approach whereby researchers collected and analyzed both quantitative and qualitative data. The validity and reliability of the original and the revised NEP scales used in this study as a measure of Environmental attitudes are well established (Hawcroft & Milfont, 2010). Data were collected during the period of three months- January 2022 to March 2022. A preplanned design for analysis is proposed based on NEP constructs. Out of the 15 scaled items hypothesized facets (Milfont, 2010) include the Reality of Limits to Growth (RLG - scale items 1, 6, and 11), Anti-anthropocentrism (ATR- scale items 2, 7, and 12), the Fragility of Nature's Balance (FNB - scale items 3, 8, and 13), Rejection of Exemptionalism (ROE -scale items 4, 9 and 14) and finally the Possibility of an Eco-Crisis (POE - scale items 5, 10 and 15). The analytical tools used for the study include Descriptive analysis, student's t test, ANOVA and multiple comparison was done using Tukey HSD test.

Table 1: NEP scale Items

No:	Items
	The reality of limit to growth
1.	We are approaching the limit of number of people the earth can support
6.	The earth has plenty of natural resources if we just learn how to develop them
11.	The earth is like a spaceship with very limited room and resources
	<u>Anti-anthropocentrism</u>
2.	Humans have the right to modify the natural environment to suit their needs
7.	Plants and animals have as much right as humans to exist
12.	Humans were meant to rule over the rest of nature
	The fragility of nature's balance
3.	When humans interfere with nature, it often produces disastrous consequences
8.	The balance of nature is strong enough to cope with the impacts of modern industrial
13.	nations
	The balance of nature is very delicate and easily upset
	Rejection of exemptionalism
4.	Human ingenuity will ensure that we do NOT make the earth unliveable
9.	Despite our special abilities, humans are still subject to the laws of nature
14.	Humans will eventually learn enough about how nature works to be able to control it

	<u>Eco-crisis</u>
5.	Humans are severely abusing the environment
10.	The so-called "ecological crisis" facing humankind has been greatly exaggerated
15.	If things continue on their present course, we will soon experience a major ecological
	catastrophe

Source: Dunlap et al (2002)

#### 4. Analysis and discussion

Table 2 depicts the observations on the overall perception of young Omani entrepreneurs on the NEP and on its five facets. It can be noticed that the entrepreneurs expect a possible eco crisis which gives a clear indication on the assumption that humans are causing physical damage to the environment. However, a relatively high degree of standard deviation says that their views regarding the same are not consistent enough. Similarly, the young entrepreneurs have a moderate awareness of nature's balance. They believe that human activity can affect the balance of nature. But again, their views are inconsistent regarding the same. The two facets of NEP such as anti-anthropocentrism and anti-exemptionalism show similar mean score values.

**Table: 2** Perceptions on the five facets of NEP (n=129)

		\		
Elements of NEP	Mean	Std. Deviation	Minimum	Maximum
Reality of Limits to Growth	2.3540	.63294	1.00	3.67
Anti-anthropocentrism	3.2274	.48588	2.33	4.33
Fragility of Nature's Balance	3.4186	.76861	1.67	5.00
Rejection of Exemptionalism	3.1189	.60495	1.33	4.00
Possibility of an Eco-Crisis	3.6382	.87205	1.33	5.00
Overall perception on NEP	3.1534	.34035	2.20	3.73

Source: Primary Survey

It has been observed that the young entrepreneurs of Oman do not endorse much about the capability of human beings to modify and exercise control on the environment. Rather, they are only subject to the constraints of nature. It is evident that their anxiety is on ecocrisis. When compared to all other views on the environment, the study results show that the entrepreneurs are a bit reluctant to agree that the earth has reached its limits with respect to resources with relatively a lesser mean score compared to other facets. But a higher degree of standard deviation points out heterogeneity perceptions across the respondents. This can be with respect to the selection of heterogeneous samples selected from various governorates. It represents a vital difference among the individual samples of young Omani entrepreneurs on the NEP with its five facets. Heterogeneity is more on the statement of Fragility of Nature's Balance and eco-crisis which can be taken as inconsistent, and which could be the possible result of outliers.

Researchers in the current study examined the role of gender in conditioning the perceptions on NEP and its various facets. Literature offers (Erdogan, 2009; Kopnina, 2011; Bastaman, 2020; AL-Mutairi, 2021) evidence regarding the variations in the perception on NEP. Table 3 exhibits the results of the Levene's test analysis as follows.

Table: 3 Influence of Gender on the Perceptions about NEP and its elements

		for E	evene's Test t-test for Equality of Means r Equality Variances							
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Differer	of the
									Lower	Upper
Reality of Limits to Growth	Н0	1.92	0.17	-1.44	127.00	0.15	-0.16	0.11	-0.39	0.06
	H1			-1.38	89.28	0.17	-0.16	0.12	-0.40	0.07
Anti- anthropocentrism	Н0	1.47	0.23	1.43	127.00	0.16	0.13	0.09	-0.05	0.30
	H1			1.49	115.02	0.14	0.13	0.08	-0.04	0.29
Fragility of Nature's Balance	Н0	0.66	0.42	-3.39	127.00	0.00	-0.45	0.13	-0.72	-0.19
	H1			-3.43	104.72	0.00	-0.45	0.13	-0.72	-0.19
Rejection of Exceptionalism	Н0	0.65	0.42	2.28	127.00	0.02	0.25	0.11	0.03	0.46
	H1			2.40	116.91	0.02	0.25	0.10	0.04	0.45
Possibility of an Eco-Crisis	Н0	1.80	0.18	-0.98	127.00	0.33	-0.16	0.16	-0.47	0.16
	H1			-1.03	116.57	0.31	-0.16	0.15	-0.45	0.14
Overall perception on NEP	Н0	3.71	0.06	-1.39	127.00	0.17	-0.09	0.06	-0.21	0.04
- 1231	H1			-1.52	125.47	0.13	-0.09	0.06	-0.20	0.03

Note:  $H_0$ : Equal variances assumed;  $H_1$ : Equal variances not assumed

Source: Primary Survey

It illustrates the perceptions of males and females separately on the different facets of NEP scale. The male and female entrepreneurs of Oman are having a same perception regarding Reality of Limits to Growth, Anti-anthropocentrism and Possibility of an Eco-Crisis. Their perceptions differ in the case of Fragility of Nature's Balance and Rejection of Exemptionalism as the significance level is less than 0.05. So the null hypothesis is rejected for these perceptions and it clearly indicates varied gender perceptions.

It was understood that the young entrepreneurs are engaged themselves mainly in ventures such as food service sectors. Hence, we examined how the type of business might have influenced their perception on NEP. The results are presented in table 4.

Table: 4 Influence of Business Type on the Perceptions of NEP and its elements

F   Sig.   t   df   Sig. (2-tailed)   Mean Difference   Std. Error Difference   Lower   U1	1 abie: 4 lf	muenc	e or bu	siness 1	ype on ti	pe on the Perceptions of NEP and its elements							
F   Sig.   t   df   Sig. (2-tailed)   Mean Difference   Std. Error Difference   Lower   U1			for Equ	ality of	t-test for Equality of Means								
Reality of Limits to Growth         Ho         3.93         0.05         -2.80         127.00         0.01         -0.34         0.12         -0.59         -0.59           Antianthropo centrism         Ho         1.25         0.27         1.68         127.00         0.10         0.16         0.10         -0.03         0.3           Fragility of Nature's Balance         Ho         0.01         0.91         -2.23         127.00         0.03         -0.34         0.15         -0.64         -0.63           Rejection of Exception nalism         Ho         1.25         0.27         2.84         127.00         0.01         0.33         0.12         0.10         0.3           Possibility of an Eco-Crisis         Ho         0.21         0.65         1.08         127.00         0.28         0.19         0.17         -0.16         0.3			F	Sig.	t	df				95% Confidence Interval of the Difference			
Limits to Growth   H <sub>1</sub>   -3.14   73.96   0.00   -0.34   0.11   -0.56   -0.00										Lower	Upper		
Antianthropo centrism  H <sub>1</sub> 1.25  0.27  1.68  127.00  0.10  0.16  0.10  -0.03  0.3  1.77  63.84  0.08  0.16  0.09  -0.02  0.3  Fragility of Nature's Balance  H <sub>1</sub> 1.25  0.27  2.84  127.00  0.01  0.01  0.03  -0.34  0.15  -0.64  -0.  Rejection of Exception nalism  H <sub>1</sub> 3.27  78.38  0.00  0.33  0.10  0.13  0.5  Possibilit y of an Eco-Crisis  H <sub>1</sub> 1.17  69.23  0.24  0.19  0.16  0.10  -0.03  0.3  0.10  0.11  -0.56  -0.03  0.3  0.12  0.10  0.13  0.5		$H_0$	3.93	0.05	-2.80	127.00	0.01	-0.34	0.12	-0.59	-0.10		
The image of the	Growth	H <sub>1</sub>			-3.14	73.96	0.00	-0.34	0.11	-0.56	-0.13		
Fragility of Nature's Balance   H <sub>1</sub>   1.25   0.27   2.84   127.00   0.01   0.01   0.33   0.12   0.10   0.13   0.15		$H_0$	1.25	0.27	1.68	127.00	0.10	0.16	0.10	-0.03	0.35		
of Nature's Balance         H <sub>1</sub> -2.26         59.98         0.03         -0.34         0.15         -0.63         -0.           Rejection of Exceptio nalism         H <sub>0</sub> 1.25         0.27         2.84         127.00         0.01         0.33         0.12         0.10         0.5           Possibilit y of an Eco-Crisis         H <sub>0</sub> 0.21         0.65         1.08         127.00         0.28         0.19         0.17         -0.16         0.5           1.17         69.23         0.24         0.19         0.16         -0.13         0.5	centrism	H <sub>1</sub>			1.77	63.84	0.08	0.16	0.09	-0.02	0.35		
Balance         H1         -2.26         59.98         0.03         -0.34         0.15         -0.63         -0.13         0.53           Possibilit y of an Eco-Crisis         H1         0.65         1.08         127.00         0.28         0.19         0.16         -0.13         0.53           The colspan="6">The colspan="6">T	of	$H_0$	0.01	0.91	-2.23	127.00	0.03	-0.34	0.15	-0.64	-0.04		
of Exceptionalism  H <sub>1</sub> 3.27  78.38  0.00  0.33  0.12  0.12  0.10  0.3  0.12  0.10  0.3  0.10  0.13  0.5  Possibilit y of an Eco-Crisis  H <sub>1</sub> 1.17  69.23  0.24  0.19  0.16  -0.13  0.5		H <sub>1</sub>			-2.26	59.98	0.03	-0.34	0.15	-0.63	-0.04		
Possibility of an Eco-Crisis       H <sub>1</sub> 3.27       78.38       0.00       0.33       0.10       0.13       0.5         1.08       127.00       0.28       0.19       0.17       -0.16       0.5         1.17       69.23       0.24       0.19       0.16       -0.13       0.5	of Exceptio	$H_0$	1.25	0.27	2.84	127.00	0.01	0.33	0.12	0.10	0.57		
y of an Eco- Crisis H <sub>1</sub> 0.21 0.03 1.08 127.00 0.28 0.19 0.17 -0.10 0.5	nalism	H <sub>1</sub>			3.27	78.38	0.00	0.33	0.10	0.13	0.54		
Crisis H <sub>1</sub> 1.17 69.23 0.24 0.19 0.16 -0.13 0.5	y of an	H <sub>0</sub>	0.21	0.65	1.08	127.00	0.28	0.19	0.17	-0.16	0.53		
		H <sub>1</sub>			1.17	69.23	0.24	0.19	0.16	-0.13	0.51		
perceptio Pi <sub>0</sub> 1.37 0.21 -0.10 127.00 0.92 -0.01 0.07 -0.14 0.1		$H_0$	1.57	0.21	-0.10	127.00	0.92	-0.01	0.07	-0.14	0.13		
	n on NEP	H <sub>1</sub>			-0.12	78.92	0.91	-0.01	0.06	-0.12	0.11		

Note: H<sub>0</sub>: Equal variances assumed; H<sub>1</sub>: Equal variances not assumed

Source: Primary Survey

As per the table 4 it can be concluded that there are significant differences in perceptions about the environment between entrepreneurs in food service industries with respect to Reality of Limits to Growth, Fragility of Nature's Balance and Rejection of Exemptionalism. Entrepreneurs are aware of limited resources so irrespective of the type of business, their perceptions show a positive result that can contribute to the future vision 2020; whereas entrepreneurs from both the industries have same perceptions with respect to Anti-anthropocentrism and Possibility of an Eco-Crisis. But overall perceptions on the

NEP between the entrepreneurs of food service activities are not significantly different and, therefore, it can be concluded that, their perceptions regarding the environmental paradigm are equal.

The required respondents for the study were selected from three business locations in Oman: namely Muscat (Central), North Al Batinah, and South Al Batinah. This prompted us to investigate the room for changes in perception towards the environment owing to the spatial differences of the businesses. The results are presented in table 5.

Table: 5 Influence of business location on the Perceptions of NEP and its elements

		Sum o	f	Mean		
		Squares	df	Square	F	Sig.
Reality of Limits to	Between Groups	10.636	2	5.318	16.487	.000
Growth	Within Groups	40.642	126	.323		
	Total	51.278	128			
Anti-	Between Groups	3.944	2	1.972	9.457	.000
anthropocentrism	Within Groups	26.275	126	.209		
	Total	30.219	128			
Fragility of Nature's	Between Groups	11.510	2	5.755	11.312	.000
Balance	Within Groups	64.107	126	.509		
	Total	75.618	128			
Rejection of	Between Groups	4.735	2	2.367	7.084	.001
Exceptionalism	Within Groups	42.109	126	.334		
	Total	46.844	128			
Possibility of an	Between Groups	5.388	2	2.694	3.692	.028
Eco-Crisis	Within Groups	91.952	126	.730		
	Total	97.340	128			
Overall perception	Between Groups	1.326	2	.663	6.189	.003
on NEP	Within Groups	13.501	126	.107		
	Total	14.827	128			

Source: Primary Survey

From the table there are variations in perception, as the F values are statistically significant. So, it can be assumed that perceptions of entrepreneurs differ owing to the location of businesses. These statistically significant difference of perceptions about the environment among entrepreneurs of different locations prompted to run a post Hoc test – Tukey HSD - to understand the extent of inter-group differences with respect to business locations to understand any observed change.

**Table:** 6 Multiple comparisons of statistically significant Perceptions of NEP and its elements with respect to business locations

Multiple Comparisons										
Tukey HSD										
						95%	Confidence			
			Mean			Interval				
Dependent	(I)	(J)	Difference			Lower	Upper			
Variable	Location	Location	(I-J)	Std. Error	Sig.	Bound	Bound			

Reality of limits to	North	South	.22938	.11467	.116	0426	.5014
growth		Central	76587*	.18999	.000	-1.2165	3153
	South	North	22938	.11467	.116	5014	.0426
		Central	99526*	.17554	.000	-1.4116	5789
	Central	North	.76587*	.18999	.000	.3153	1.2165
		South	.99526*	.17554	.000	.5789	1.4116
Anti-	North	South	33484*	.09220	.001	5535	1162
anthropocentrism		Central	56587*	.15276	.001	9282	2036
1	South	North	.33484*	.09220	.001	.1162	.5535
		Central	23103	.14114	.234	5658	.1037
	Central	North	.56587*	.15276	.001	.2036	.9282
		South	.23103	.14114	.234	1037	.5658
Fragility of	fNorth	South	.21196	.14402	.308	1296	.5535
Nature's Balance		Central	82937*	.23861	.002	-1.3953	2634
	South	North	21196	.14402	.308	5535	.1296
		Central	-1.04133*	.22046	.000	-1.5642	5185
	Central	North	.82937*	.23861	.002	.2634	1.3953
		South	1.04133*	.22046	.000	.5185	1.5642
Rejection of	fNorth	South	34588*	.11672	.010	6227	0690
Exceptionalism		Central	.16429	.19339	.673	2944	.6229
	South	North	.34588*	.11672	.010	.0690	.6227
		Central	.51016*	.17868	.014	.0864	.9339
	Central	North	16429	.19339	.673	6229	.2944
		South	51016*	.17868	.014	9339	0864
Possibility of ar	North	South	41173*	.17248	.048	8208	0026
Eco-Crisis		Central	.04762	.28577	.985	6302	.7254
	South	North	.41173*	.17248	.048	.0026	.8208
		Central	.45935	.26403	.195	1669	1.0856
	Central	North	04762	.28577	.985	7254	.6302
		South	45935	.26403	.195	-1.0856	.1669
Perception on New	North	South	12287	.06609	.155	2796	.0339
Ecological		Central	38249*	.10950	.002	6422	1228
Paradigm	South	North	.12287	.06609	.155	0339	.2796
		Central	25962*	.10117	.031	4996	0197
	Central	North	.38249*	.10950	.002	.1228	.6422
		South	.25962*	.10117	.031	.0197	.4996
* The mean difference	is significan	at the $0.03$	5 level.				

The multiple comparison of overall perception on the environment indicates that the young entrepreneurs from North Province have comparatively low perception from those who are from other two provinces. However, the difference between North and South provinces appears to be statistically non-significant. This may challenge the generalization of the result. It is also interesting to see that the entrepreneurs from the Central Province appear to have comparatively higher perception towards environment than their counterparts from the other two Provinces, with statistically significant results. Entrepreneurs from North Al Batinah seems to be more dominative compared to the others from the South and Central regarding Anti-anthropocentrism. The entrepreneurs

from Central i.e., Muscat region has better perceptions compared to South and North regarding Fragility of Nature's Balance, which envisages the balance to be maintained in nature and its preservation. The entrepreneurs from the North are slightly less contributing towards the balancing of nature. The rejection of exemptionalism is clearly explaining the possibility of an eco-crisis. The knowledge of the entrepreneurs about the possibility of a crisis in the ecosystem is a good indicator of young entrepreneurs' awareness level. Overall, entrepreneurs from the Central, i.e., Muscat region have a good knowledge about their environment compared to Northern and southern regions as it shows more significant results. It can be probably due to the highest number of Micro, Small and Medium sized industries in the region. Among the five facets of NEP, the reality of limits to growth, which is considered as a warning that the earth has limited resources, is acknowledged sufficiently well by almost all respondents. Secondly, most of the respondents endorsed anti- anthropocentrism or human domination and thirdly, the balance of nature as the awareness that human activity affects nature's balance.

### 5. Discussion and scope of future research

The primary aim of the current research was to examine the ecocentric views of budding entrepreneurs in Sultanate of Oman using NEP scale. The results show that out of five facets of NEP, respondents expect a possibility of eco-crisis which need to be addressed. At the same time, it's good to notice the entrepreneur's awareness concerning the knowledge regarding the fact that excess of human activities would disturb the balance of nature. Further to Possibility of an Eco-Crisis the other facets followed are Anti-anthropocentrism, Anti-exemptionalism and Reality of limits to growth. This demonstrates the considerable influence of environmental Paradigms among the budding Omani entrepreneurs. With reference to the impact of gender on the different facets of NEP scale, its noticed that male and female entrepreneurs of Oman show almost same perception regarding Reality of Limits to Growth, Anti-anthropocentrism and Possibility of an Eco-Crisis. Their perceptions differ only in the case of Fragility of Nature's Balance and Rejection of Exemptionalism. These differences could reflect the gender variations regarding physical and behavioral aspects. It can probably be minimized with appropriate environmental education at school and University level.

The type of business chosen also reflected significant differences in environmental perceptions between entrepreneurs in food service industries with respect to Reality of Limits to Growth, Fragility of Nature's Balance and Rejection of Exemptionalism. The results of this empirical research would empower entrepreneurs to more likely work out the availability of resources needed to execute their business operations in the best feasible way to gain a competitive advantage. The results reveals that the Oman's youth is worried about the environmental resources required for the future. The environmental concerns can inculcate higher levels of education to create a positive attitude that's more supportive to the environment and a way forward to Oman's vision 2040. The difference in these three facets points out the same concerns regarding the need for protecting natural resources as balancing of nature is considered as very delicate and time consuming. The entrepreneurs from the central, i.e., Muscat region have a better understanding of their

environment than those from the Northern and Southern regions, as substantiated by more significant findings.

The current research was limited to the young entrepreneurs from only three governorates Muscat, North Batinah and South Batinah in Sultanate of Oman from various sectors of the food service industry. There is a scope for future research on NEP scale items across different cultures. The size and nature of a business can also vary in its applicability for predicting environmental attitudes and behaviors. Demographical factors alone can be focused as a future research agenda on environmental initiatives among entrepreneurs from various sectors and regions. Sustainability oriented entrepreneurs can be studied separately who are more likely to exhibit the readiness to implement sustainability related initiatives.

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