

# Analyzing Sustainable Development in OPEC countries vs OECD countries: Comparative study by TOPSIS methodology

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**Abstract:** Sustainable Development, SD, is a compatible compound of economic, social and environmental dimensions for achieving admissible welfare for current citizens without hurting welfare of future generations. Nowadays, achieving to adequate level of sustainable development, SD, is considered as an inevitable necessity in different countries. Unlike traditional development, Sustainable Development maintains on a comprehensive concept of development which covers social justice, environmental considerations, and minimum economic well-being for all citizens. Thus, it is the crossroad of society, economy, and environment altogether. Providing necessary conditions for Sustainable Development is a mission of public policy for both developed and less developed countries. Hence, this article by using different social, economic and environmental indexes alongside TOPSIS methodology, is analyzing the situation of OECD, for achieving Sustainable Development on one hand and that of OPEC countries on the other. The findings of this article indicate that: firstly the level of SD is not unique for both OECD on one hand OPEC countries on the other, and there are some distinctive differences among both categories of selected countries. Secondly, and as SD is concerned, there is a huge gap between developed and less developed countries.

**Keywords:** OPEC and OECD, Political Economy, Sustainable Development, TOPSIS Methodology,

## Introduction

Development generally and sustainable development particularly, have been indicating specific “social change levels” influential on economic progress. Economic Development is different from economic growth for, economic growth means raising mere GDP this year as compared with last year. Development, however, is a multidimensional term in principle. Hence it is associated not only with economic growth, but also it is concerned with politics, management, culture, communications in a progressing trend along with human and social-oriented process (Cown and Shenton 1996, Morse 2008, Gregory et al 2009). Development also presents a body of instruments and different parameters to be used in analyzing and evaluating different outlooks (O, Farrell and Anderson 2010). In the global environmental conference, so-called, “our common future” the term sustainable development was created in developmental literature (Tosun 2001). Sustainable development is generally such a developmental level which provides the necessities and prosperities of the current generation without diminishing the capabilities of the next generations to achieve their own goals. Sustainable development, encompasses environmental and ecological sustainability, economical sustainability and social sustainability (Gilmanr 1996, 1, Shriberg 2002, Jackson 2010). Thus, in sustainable development, justice and equality between different generations, equality, and justice intergeneration, conservation of natural ecosystem, the least possible using unrenewable resources, diversified societies, self-reliance society, individual well-being and satisfying all necessary requirements of societies are emphasized strictly. Principle of intergenerational justice, social justice principle (intergenerational justice), principles of natural interdependence of human and nature, principle of conservation of biological diversity, principle of

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effective communication of individuals and groups in decision making, attention to native culture and national literature, gender equality, peace and security, access to valid information and scientific database are enumerated as principles of process of sustainable development (Lealfilho 2000). Withstanding of the significance and the effectiveness of the concept of sustainable development, it does have its own complicated structure as well (Dully 1996). Considerable numbers of leaders of different countries suggested the doctrines of sustainable development in 1992 in Rio de Janeiro conference which was concerned with environmental and ecosystem. A main and warning point is that all experts and professional peoples in sustainable development, believe strictly that any concept of sustainable development irrelevant to environmental protections is meaningless and cannot achieve to the goals of traditional development, let alone to the sustainable development (Moran et al 2008, Kates et al 2010). Therefore in the conference in question, the interrelationships of development and environment were discussed and were disputed comprehensively. The impact of economic growth on the ecosystem was debated remarkably. Interestingly, during the very conference in addition to the environmental case, the new term was added to sustainable development and that is social development (Gilbert et al 1996). After adding this term to sustainable development it encompassed at least three essential dimensions; environmental dimensions, social dimensions, and economic dimensions (Mitlin 1992). After populating and publicizing the basic and original concept of sustainable development, some relevant organizations and distinguished authors and experts in comprehensive development were extending the concept in question and were adding to it both extensively and intensively. For instance, according to OECD, sustainable development is not a static topic, it is rather a dynamic and changing one. In other words, sustainable development is not a temporary project but an essential and perpetual process. According to definition as such, so many doctrines, procedures, laws, policy-making and decision makings are institutionalized (Strauge and Bauley 2008). Nevertheless, good governance and optimum management are main prerequisites, for achieving sustainable development (Evans et al 2005, Adams 2006). As goals mechanisms, necessities and actual performance are concerned, the future of sustainable development is very challenging and progress of which is provided to comprehensive supports of government, international and national organizations, non- government units and even ordinary people. Thereupon, so many studies posit new questions, some authors, policymakers and general strategists in the subjects reopen new windows for the successfulness of sustainable developments (Danish et al 2019, Dawes, 2019).

Petroleum is a basic resource which is used globally and is produced by several countries including OPEC. At the same time and due to some known and obvious factors, its using in some OPEC countries is associated with considerable environmental challenges. Fragile institutions, shaky communications, non-talented labor force, in oil industries, lack of vital and strategic policies, organization structure, and feeble governance are mentioned as typical factors behind current unsustainable status of oil industries in OPEC (Mariano 2007, Beltersen 2014, Cammac 2019). Also, there are some side effects of wrong utilization of oil in OPEC, which are absent in non-OPEC countries. High poverty, domestic wars, low rate of economic growth, low level of democracy are mentioned typically (Obadina 2003, UNDP 2006, international alert 2013, CIP 2019). Comparing OPEC and non-OPEC, arguably indicate different levels of success in sustainable development. By using TOPSIS the method this paper is comparatively analyzing the status of sustainable development of two groups of countries OPEC countries and OECD countries.

Reviewing empirical studies: reviewing empirical studies associated with the sustainable development SD, in this introductory section, will illustrate the current level of scientific activities in this regard. Since 1990, both scientists and policymakers especially in developing countries have been concerning about the relationship between economic growth on one hand and ecosystems and other environmental elements on the other hand. Outcomes of those concerns and related studies and their feedback in UN summits and sessions were influential in generating some dimensions of sustainable developments, SD. Some of the first studies believed that economic growth is the cause of environmental pollutions. By using multi-criterion decision making approaches a few studies have been ranking the selected countries base on SD degree. Some even have studied the ranking of local states and local provinces from the standpoint of SD. For instance, by using TOPSIS method Balcerzak and Pietrzak (2019) have studied the SD ranking of countries of European nations between 2004 and 2013. They concluded that firstly the level of SD in countries of European unions are not identical. They classified the countries in question into 5 categories. In their study, even the level of countries in each category in question was not identical as well. One result of that study indicated that Sweden had the best circumstances, whereas Romania did show the most problematic status in case of SD, among members of European unions. Azimifard et al (2018), used TOPSIS and AHP methods to investigate a special case of sustainability of providers for the Iranian steel industry framework. They had to choose the best possible criteria for final selection the most sustainable providers of the Iranian steel industry amongst 40 countries. Mateuz et al(2018) studied some ranking based on the goals of SD for 27 countries of European unions for 2016. They measured the SD status of those countries according to 14 goals (selected from 17 goals of SD arranged for the millennium development). Their research showed that as the goals of sustainable development are concerned Austria does have

the best status and Romania acquires the worst possible circumstances. Namazi and Mohamadi (2018) were studying the relationship between economic growth and natural resources from an efficiency perspective. Moreover, they concentrated on the efficiency of innovation concerned with SD. They investigated the situation of 141 countries. They concluded that efficiency of innovation is different from country to country, consequently, as instruments for adopting SD are concerned, some can reach out to SD sooner than others. They also indicated that progress in SD at the same time is connected to the structure of political power on one hand and performance of the government on the other. Dadgar and Nazari (2018) studied the different dimensions of SD for Iranian provinces. They classified the beds and factors leading to SD in 3 general categories; economic, social and environmental ones. They ranked Iranian provinces according to the criterion of the related categories. They concluded that almost all Iranian provinces suffer from deficiencies of SD and all elements related to that. The degree of vulnerability, however, is not the same, however, some provinces do indicate problematic indexes in SD some others show relatively better status.

## Methodology

We are using the specific method for investigating the SD status of OPEC and OEDC counties in a comparative framework. This methodology is the so-called “Technique for Order Preference by Similarity to Ideal Solution, TOPSIS”. Hwang and Yoon (1981) introduced the TOPSIS method. This method is applied for multiple criteria decision-making cases. According to this method, different options are ranking according to their similarities to the ideal solutions. In other words, first, the ideal solution is specified. Then according to that, the best option is chosen. The more similarities with the ideal solution each option do have, the more scores it is getting, and the better ranking it would obtain (Tang et al 2019). Specifically, at the beginning of research two kinds of ideal references are defined and finalized; positive ideal solution, PIS, and negative ideal solution NIS. PIS indicates the best and NIS shows the worst possible status among all possible solutions. The criterion for counting the scores depends on how close or how far is the case in question, compared with PIS and NIS. The scores are counted accordingly and the different options are ranked based on scores they get. In the case of PIS we indeed are looking for a solution that maximizes the associated profit or minimized the pertinent cost (Kacprzak 2019, LI et al 2019). Meanwhile, the privilege of the TOPSIS method is much more than other multi-criterion decision-making methods. We can mention some of the privileges of TOPSIS over its alternatives. One is the simple application of the TOPSIS method in both quantitative and qualitative Criteria in analyzing different cases. Second, is the possibility of changing criteria in the TOPSIS method and checking the reaction of the system to changes in question. The third one is the number of criteria, the fourth one is the simplicity and speed of calculation and measures in case of the TOPSIS method. The fifth is possibility of checking priorities according to the similarity logics. Sixth one is obtaining the best and the worst among different options. Seventh is the possibility of weighing of options (Srdjevic 2004 Vidal and Sanchez Pantoja 2019). We can also add to the helpful characteristics of the TOPSIS method, the mathematical logic behind it and the efficiency of applying it and its negligible difficulties while is applying. Also taking out the transparent and quantities ranking is another helpful and efficient characteristic of TOPSIS method.

Different stages of the TOPSIS method: if for a multi-criterion decision-making case,  $n$  is the number of criteria and  $M$ , number of choices, to find out the best option, we should proceed in direction with the following framework. The first stage is the designing of a decision matrix by considering the number of criteria, and the number of options, and analyzing all options. Decision matrix would be:

$$X = \begin{bmatrix} x_{11} & \dots & x_{1n} \\ \vdots & \dots & \vdots \\ x_{m1} & \dots & x_{mn} \end{bmatrix}$$

Where  $X_{ij}$  is a function of  $i$  options concerned with  $j$  criteria. The second stage is designing the  $R$  matrix which is a dimensionless one:

$$R = \begin{bmatrix} r_{11} & \dots & r_{1n} \\ \vdots & \dots & \vdots \\ r_{m1} & \dots & r_{mn} \end{bmatrix}$$

There are different methods for making a matrix dimensionless. We use the following equation:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m x_{ij}^2}}$$

For making dimensionless the positive and negative criteria we can use the following equations respectively:

$$r_{ij} = \frac{x_{ij} - \min\{x_{ij}\}}{\max\{x_{ij}\} - \min\{x_{ij}\}}$$

$$r_{ij} = \frac{\max\{x_{ij}\} - x_{ij}}{\max\{x_{ij}\} - \min\{x_{ij}\}}$$

The third stage is determining the vectors for weighting of criteria considering the significance of different criteria we define, the vector of the weight of criteria would be:

$$W = [w_1 \quad w_2 \quad \dots \quad w_n]$$

Elements in W vector are significant coefficients of different criteria. Increasing the positive criteria promote the SD, increasing the negative criteria to demote the SD.

The fourth stage is determining a weighted criteria decision matrix which is:

$$v_{ij} = w_j r_{ij} \quad j = 1, \dots, n; \quad i = 1, \dots, m.$$

The fifth stage is finding out ideal solution,  $A^*$  and non-ideal,  $\bar{A}$  which are:

$$A^* = \{v_1^*, v_2^*, \dots, v_j^*, \dots, v_n^*\}$$

$$A^- = \{v_1^-, v_2^-, \dots, v_j^-, \dots, v_n^-\}$$

Where  $v_j^*$  the best isvalue of criteria and  $v_j^-$  is the worst value among all options.

The sixth stage is calculating the distance of each option from ideal  $S_j^*$  and non-ideal solutions  $S_i^-$  respectively:

$$S_i^* = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^*)^2}$$

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2}$$

Finally the seventh stage is calculating the similarity index  $C_i^*$ :

$$C_i^* = \frac{S_i^-}{S_i^* + S_i^-}$$

Similarity index changes between zero and one. The more similar is an option to the ideal issue, the closer is its index to one. Obviously, if an option is coinciding completely on the ideal issue, the distance between them would be zero. Reversely, if an option is coinciding on wrong or non-ideal issue, then its distance to the wrong issue, (anti-ideal) would be zero and consequently, its similarity index will be zero. Eventually, and in the final ranking process the portion who does show the most similarity to the ideal issue does obtain the first rank and an issue which does have the least similarity to the ideal issue would obtain the last ranking.

### Data and the estimation of the status of variables

Finding out the SD indexes are going to be helpful instruments for better monitoring on the trends and process of SD and are used as apparatuses for policymaking in direction with improving SD in different societies. We are using the data related to SD for two groups of countries that is OECD and OPEC for the 2006-2016 period. It is argued that OECD countries, comparatively speaking, are planning much more serious functions in improving SD status than other countries. Therefore we have considered their performances in SD as a kind of benchmark for comparing other

countries. On the other hand, and due to utilizing massive natural resources including oil and gas, OPEC countries are evaluated as resource curse issues. At least some OPEC countries including Iran are wasting plenty of natural resources. Therefore, arguably OPEC countries are squandering natural resources and are hurting much more environmental and ecosystem issues. Thus, as SD indexes are concerned, apparently, and as rule of thumb, one can predict to see the more successful circumstances regarding OECD and the worse status of OPEC countries in the very issue. By doing this research we are indirectly testing the above rule of the thumb in this article as well. We are working with the following 7 indices in this study: 1- basic needs, 2- personal development and health, 3- well-balanced society 4- natural resources 5- climate and energy status 6- transition and finally seven economic status. For presenting the performance of the mentioned indices, we first introduce them briefly: 1- basic needs index is measured as the average of other 3 sub-indexes including sufficient food, sufficient to drink and safe sanitation. 2- Personal development and health is the mean of 3 sub-indexes including education, healthy life, and gender equality. 3- well- balanced society, as average mean of 3 sub-indexes: income distribution, standard population growth, and good governance. 4- natural-resources status as a mean of 3 sub-indexes, biodiversity, renewable water resources and standard consumption 5- climate-energy as a mean of 4 sub-indexes energy use, energy-saving, greenhouse gases, and renewable energy, 6- transition index as mean of two sub-index organic farming and genuine savings. 7- Economy status index as considering 3 sub-indexes GDP, employment and public debt. By the way, we can classify those 7 indexes into 3 categories. That is indexes 1 through 3 are indicating the human well-being status. Indexes 4 and 5 show the environmental status and indexes 6 and 7 specify the economic status. By using the TOPSIS method we showed the ranking of SD for OECD and OPEC countries in table (1).

Rank	Country	SD2006	country	SD2008	country	SD2010	country	SD2012	country	SD2014	country	SD2016
1	Switzerland	0.732	Switzerland	0.691	Switzerland	0.701	Switzerland	0.734	Switzerland	0.763	Switzerland	0.784
2	Slovenia	0.679	Sweden	0.679	Sweden	0.667	Sweden	0.663	Denmark	0.688	Denmark	0.712
3	Sweden	0.667	Slovenia	0.663	Slovenia	0.659	Slovenia	0.65	Norway	0.679	Norway	0.692
4	Finland	0.663	Finland	0.647	Slovak Republic	0.641	Finland	0.639	Sweden	0.667	Sweden	0.684
5	Denmark	0.655	Lithuania	0.64	Latvia	0.635	Norway	0.628	Czech Republic	0.654	Czech Republic	0.671
6	Austria	0.652	Slovak Republic	0.638	Finland	0.627	Denmark	0.625	Finland	0.646	Poland	0.644
7	Norway	0.634	Austria	0.628	Czech Republic	0.622	Czech Republic	0.622	Lithuania	0.632	Slovak Republic	0.64
8	United Kingdom	0.625	Denmark	0.628	Austria	0.612	Lithuania	0.608	Poland	0.623	Lithuania	0.635
9	Netherlands	0.612	Norway	0.622	Lithuania	0.61	Austria	0.605	Slovak Republic	0.623	Latvia	0.634
10	Czech Republic	0.609	Estonia	0.605	Estonia	0.607	Slovak Republic	0.6	Estonia	0.607	Finland	0.633
11	Latvia	0.603	Czech Republic	0.6	Norway	0.602	Poland	0.584	Austria	0.602	Germany	0.633
12	Portugal	0.603	Netherlands	0.585	Denmark	0.59	Luxembourg	0.578	Germany	0.585	Slovenia	0.63
13	Slovak Republic	0.602	Luxembourg	0.578	Netherlands	0.57	Estonia	0.558	Slovenia	0.585	Estonia	0.627
14	Hungary	0.6	United Kingdom	0.577	Germany	0.565	Germany	0.558	Latvia	0.581	Austria	0.625
15	Luxembourg	0.593	Hungary	0.575	Poland	0.56	Hungary	0.556	Luxembourg	0.575	Hungary	0.6
16	Estonia	0.589	Germany	0.571	Luxembourg	0.557	Netherlands	0.55	Australia	0.57	Australia	0.59
17	Germany	0.583	Latvia	0.554	Italy	0.549	Australia	0.543	Netherlands	0.57	Netherlands	0.584
18	Australia	0.571	Spain	0.553	Spain	0.547	New Zealand	0.539	Korea, South	0.568	Luxembourg	0.571
19	Spain	0.57	Australia	0.543	Hungary	0.544	Korea, South	0.537	Hungary	0.558	Korea, South	0.564
20	Lithuania	0.568	Italy	0.541	United Kingdom	0.539	Mexico	0.533	Mexico	0.547	United Kingdom	0.547
21	Italy	0.552	Portugal	0.533	Australia	0.519	Latvia	0.527	United Kingdom	0.526	Italy	0.545
22	Mexico	0.551	France	0.532	Mexico	0.507	Italy	0.525	France	0.519	Mexico	0.542
23	France	0.543	Poland	0.519	Korea, South	0.506	United Kingdom	0.512	Italy	0.519	Portugal	0.538

24	Ireland	0.531	Mexico	0.513	France	0.5	France	0.5	New Zealand	0.513	France	0.532
25	Iceland	0.529	Korea, South	0.506	Portugal	0.487	Spain	0.5	Turkey	0.507	Spain	0.531
26	Korea, South	0.529	New Zealand	0.5	New Zealand	0.486	Belgium	0.494	Belgium	0.5	New Zealand	0.527
27	New Zealand	0.519	Greece	0.481	Belgium	0.476	Turkey	0.486	Spain	0.494	Turkey	0.521
28	Greece	0.512	Ireland	0.481	Ecuador	0.467	Portugal	0.481	Portugal	0.487	Iceland	0.519
29	Poland	0.506	Belgium	0.471	Japan	0.444	Chile	0.447	Ecuador	0.461	Belgium	0.512
30	Belgium	0.477	Japan	0.44	Greece	0.429	Nigeria	0.446	Ireland	0.456	United Arab Emirates	0.512
31	Ecuador	0.471	Canada	0.436	Nigeria	0.427	Kuwait	0.442	Kuwait	0.44	Ireland	0.468
32	Japan	0.459	Nigeria	0.434	Ireland	0.413	Ecuador	0.436	United Arab Emirates	0.44	Ecuador	0.466
33	Canada	0.45	Ecuador	0.423	Canada	0.403	Japan	0.427	Iceland	0.438	Chile	0.459
34	Turkey	0.447	Angola	0.42	Kuwait	0.395	Ireland	0.425	Japan	0.438	Japan	0.456
35	Kuwait	0.433	Kuwait	0.4	Turkey	0.386	Congo	0.422	Nigeria	0.438	Kuwait	0.451
36	Chile	0.418	Venezuela	0.4	Chile	0.384	Israel	0.413	Gabon	0.432	Nigeria	0.438
37	Qatar	0.413	Turkey	0.397	Venezuela	0.377	Algeria	0.405	Chile	0.421	Israel	0.437
38	Angola	0.409	Qatar	0.395	Angola	0.376	Canada	0.405	Canada	0.416	Canada	0.427
39	United States	0.405	Algeria	0.392	Gabon	0.373	Saudi Arabia	0.405	Israel	0.405	Saudi Arabia	0.42
40	Venezuela	0.402	Iceland	0.392	Congo	0.372	Qatar	0.402	Saudi Arabia	0.405	Venezuela	0.416
41	Nigeria	0.4	Chile	0.373	Israel	0.37	United Arab Emirates	0.4	Venezuela	0.405	Algeria	0.403
42	United Arab Emirates	0.4	Israel	0.365	Iceland	0.368	Iceland	0.398	Qatar	0.402	Gabon	0.398
43	Algeria	0.397	United Arab Emirates	0.361	Algeria	0.366	Greece	0.392	Greece	0.388	Qatar	0.398
44	Iran	0.397	Congo	0.36	Saudi Arabia	0.354	Venezuela	0.388	Algeria	0.384	Greece	0.39
45	Saudi Arabia	0.381	Saudi Arabia	0.35	United Arab Emirates	0.35	Angola	0.358	Congo	0.381	Iran	0.366
46	Israel	0.377	Iran	0.338	Qatar	0.341	Gabon	0.354	Angola	0.375	United States	0.361
47	Gabon	0.361	Gabon	0.337	Iran	0.333	Iran	0.342	Iran	0.375	Angola	0.358
48	Congo	0.344	United States	0.333	Libya	0.319	United States	0.329	United States	0.347	Congo	0.337

49	Libya	0.308	Libya	0.311	Iraq	0.292	Libya	0.324	Libya	0.329	Libya	0.257
50	Iraq	0.262	Iraq	0.275	United States	0.288	Iraq	0.25	Iraq	0.243	Iraq	0.167

Table 1. Ranking of SD indexes OPEC and OECD countries with TOPSIS method.

Source: Authors by WB (2019), SDI (2019)

As, table (1), indicates and SD ranking is concerned the majority of OECD countries acquire desired status. Especially some countries including Switzerland, Sweden, Finland, Denmark, Austria, Norway, UK, Netherlands, and the Czech Republic are amongst the first 10 rankings in the world. The SD ranking of OPEC countries however indicate the problematic status in those countries. SD ranking for Venezuela is 40 among 50 countries, Iran obtains 44, Saudi Arabia 45 and Congo 48 rankings. Further, we classified the countries according to SD indices into 4 categories; first category with the excellent and high degree of SD, good or desirable degree of SD as second category, undesirable SD as third and very undesirable SD as group 4 (table 2).



Table 2. Classification of OPEC and OECD countries with TOPSIS method.

country	2006	2008	2010	2012	2014	2016
Algeria	3	3	3	3	3	3
Angola	3	3	3	4	4	4
Australia	2	2	2	2	2	2
Austria	1	1	1	2	2	2
Belgium	3	3	3	2	3	3
Canada	3	3	3	3	3	3
Chile	3	3	3	3	3	3
Congo	4	3	3	3	4	4
Czech Republic	2	1	1	1	1	1
Denmark	1	1	2	1	1	1
Ecuador	3	3	3	3	3	3
Estonia	2	1	1	2	2	2
Finland	1	1	1	1	1	2
France	2	2	2	2	2	2
Gabon	4	4	3	4	3	3
Germany	2	2	2	2	2	2
Greece	2	3	3	3	3	4
Hungary	2	2	2	2	2	2
Iceland	2	3	3	3	3	2
Iran	3	4	4	4	4	4
Iraq	4	4	4	4	4	4
Ireland	2	3	3	3	3	3
Israel	3	3	3	3	3	3
Italy	2	2	2	2	2	2
Japan	3	3	3	3	3	3
Korea, South	2	2	2	2	2	2
Kuwait	3	3	3	3	3	3
Latvia	2	2	1	2	2	2
Libya	4	4	4	4	4	4
Lithuania	2	1	1	2	2	2
Luxembourg	2	2	2	2	2	2
Mexico	2	2	2	2	2	2
Netherlands	2	2	2	2	2	2
New Zealand	2	2	2	2	2	2
Nigeria	3	3	3	3	3	3
Norway	1	1	1	1	1	1
Poland	3	2	2	2	2	2
Portugal	2	2	2	3	3	2
Qatar	3	3	4	3	3	3
Saudi Arabia	3	3	3	3	3	3
Slovak Republic	2	1	1	2	2	2
Slovenia	1	1	1	1	2	2
Spain	2	2	2	2	3	2
Sweden	1	1	1	1	1	1

Switzerland	1	1	1	1	1	1
Turkey	3	3	3	3	2	2
United Arab Emirates	3	3	4	3	3	3
United Kingdom	1	2	2	2	2	2
United States	3	4	4	4	4	4
Venezuela	3	3	3	3	3	3

As, table (2) indicates all OECD countries are categorized in either very high desirable or desirable, whereas OPEC countries are classified either undesirable or very undesirable. As the economies of OPEC countries are oil oriented ones, the undesirable status of SD for those countries could be acceptable and consistent with the results of our paper. Potentially speaking oil is a very valuable source of wealth benefiting from that wealth actually, however, is provided to and subject to a comprehensive pack of structural and organizational requirements, lack of which could change that source of economic wellbeing to a source of economic hardships. Utilizing oil in a standardized way can raise economic growth and social welfare. It could at the same time become an instrument of unsustainability. So oil could be a double-edged sword; it must be a helpful device for economic progress, or reversely it may be a hurtful appliance for underdevelopment. As indexes of SD are concerned if using oil is under such optimum management that does not hurt to the ecosystem, consider the rights of next generations and can help to have a fair distribution of income in sociality, it is very welcomed and compatible with SD theories. In some OPEC countries, however, the utilizing of oil is not in its standardized framework and is deteriorating the SD indexes as well. Resource curse or paradox of plenty, rentier state, Dutch Disease are some terms usually used in bad using oil in some countries. For instance in the case of Iran squandering oil has caused Dutch Disease, has worsened the taxing system and has weakened the private sector (Dadgar Nazari 2018, Dadgar 2019). Rentier government in some, OPEC countries have lessened the development stages and triggered wasting resources. A considerable part of the GDP of OPEC countries belongs to oil revenue and not employing labor, technology and so on. Comprehensive requirements for optimum benefiting from oil and approaching to improvement in SD indexes are democratic laws applying good governance and optimum management. Some OPEC countries do have plenty of oil resources but suffer from bad governance and non- standard constitutional law. Amartya Sen (1981) the great noble laureate in a seminal work proves that democratic countries with low resources [like OECD] can resolve the famine problem much more efficient than countries with plenty of resources [like OPEC countries] but with non-democratic governance.

### Concluding remarks

Nowadays, understanding the weaknesses and strength of countries and realizing development gaps between countries are helpful for better policymaking in the future. Measuring the level of development and especially the level of SD is required both for policymakers and research centers. Under SD theory, a minimum of welfare for all generations, a safe and secure environment and a fair distribution of income are guaranteed. By applying the TOPSIS method for selected countries, in this paper, the ranking of OECD and OPEC countries is measured and compared. According to the TOPSIS method, the better option does have less distance from the ideal solution and the more distance from non- ideal one. As SD indices are concerned, the final results showed the predominance of OECD degree of SD over OPEC. The status of SD indexes are classified in 4 optimum and high degree of sustainability on one hand, and low and very low degree of sustainability on the other hand. The OECD is in either high or good status, whereas OPEC, countries are classified either in low or very low status of sustainable development. As one of the most influential element of SD is improving the environmental status and because collapsing the ecosystem and environmental issues are one reality in continuation of 21 century, one policy recommendation of this paper is establishing a comprehensive environmental organization for monitoring and controlling the ecosystem trends and requiring government for operating serious policies in fortifying current ecosystem and combating with the factor collapsing the environment. Also improving good governance and improving the social control and creating democratic institutions for safeguarding SD are urgently required.

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