Survey of Natural Resources Abundance in MENA Region

Submitted By

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Abstract

The study identifies the status and structure of natural resources in the MENA region through the use of table comparisons and graphical analyzes of Bar and line graphs during the period (1970-2017) for all MENA region counties represented by (23) countries.

the study proves that most of the countries in the MENA region are characterized by a great abundance of natural resources, with the exception of five countries, namely Jordan, Turkey, Israel, Lebanon and Palestine, which did not exceed the average revenues of natural resources 1% of their GDP during the period. The rest of the countries range from countries with an average natural resource revenue of more than 40% of output, led by Kuwait, Oman, Libya, Saudi Arabia and Qatar. Iraq is approaching them by 38.5%. other countries with an average revenue from natural resources is (20%-30%) of output, headed by Yemen. And Countries with an average resource revenue of between (10% -19%) of the output, led by Mauritania, and Egypt at the bottom of 11.5% of the output. Finally, countries ranging from (2%-9%) of output are Bahrain with 7.4%, Tunisia 6.3%, Sudan 4.3%, and Morocco 2%.

Also, the abundance of natural resources in the countries of the MENA region is primarily due to the abundance of the oil resource and, to a lesser extent, to the abundance of the natural gas resource. and the countries of the MENA region are still rent-dependent countries dependent on the export revenues of natural resources in their raw form, and their economic and productive structures have not evolved to exploit these natural resources in industry. this appears in the proportion of raw natural resources exports from total goods exports.

تحدد الدراسة حالة وهيكل الموارد الطبيعية في منطقة الشرق الأوسط وشمال إفريقيا من خلال إستخدام المقارنات الجدولية, والتحليلات البيانية المتمثلة فى رسومات (Bar), (Line) خلال الفترة (1970-2017) لجميع دول إقليم الميناء المتمثلة فى (23) دولة.

أثبتت الدراسة أن معظم دول الميناء تتميز بوفرة كبيرة من الموارد الطبيعية ، باستثناء خمس دول ، هي الأردن وتركيا وإسرائيل ولبنان وفلسطين ، والتي لم تتجاوز متوسط إيرادات الموارد الطبيعية 1 ٪ من الناتج المحلي الإجمالي خلال هذه الفترة. بينما تتراوح بقية الدول من البلدان التي يبلغ متوسط إيرادات الموارد الطبيعية فيها أكثر من 40 ٪ من الإنتاج ، علي رأسها الكويت وعمان وليبيا والمملكة العربية السعودية وقطر. يقترب العراق منهم بنسبة 38.5٪. أما البلدان الأخرى التي يبلغ متوسط إيراداتها من الموارد الطبيعية (20 ٪ -30 ٪) من الناتج ، علي رأسها اليمن. والبلدان التي يبلغ متوسط إيرادات الموارد فيها ما بين (10٪ -19٪) من الناتج ، علي رأسها موريتانيا ، و في مؤخرتها مصر 11.5٪ من الناتج. أخيرًا ، الدول التي تتراوح بين (2٪ -9٪) من الإنتاج هي البحرين بنسبة 7.4 ٪ ، تونس 6.3٪ ، السودان 4.3٪ ، والمغرب 2٪.

كما أن وفرة الموارد الطبيعية في دول الميناء ترجع في المقام الأول إلى وفرة المورد النفطي وإلى حد أقل إلى وفرة مورد الغاز الطبيعي. وما زالت بلدان منطقة الميناء تعتمد على الريع تعتمد على عائدات تصدير الموارد الطبيعية بشكلها الخام ، ولم تطور هياكلها الاقتصادية والإنتاجية لاستغلال هذه الموارد الطبيعية في الصناعة. هذا يظهر في نسبة صادرات الموارد الطبيعية الخام من إجمالي صادرات السلع

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Introduction

Natural resources are gift from Allah and its fundamental for survive the life. Also, natural resources are the back bone of every economy, as it provides two basic functions, the first: raw material for production good and service, and the second is raw material for environmental service. (Mensha & Castro , 2004)

Everything we use, from the food we eat to keep us a live, comes from substances found on this planet. The hunger for land, water, mineral supplies comes from human activities. (Larkin et al., 1981).

recently Human beings rising exploitation of natural resources to the point where it threatens our existence, so we have to use natural resources in sustainable manner.

Some studies have a surprising empirical result, the negative relationship between economic growth and natural resources abundance, which poses a conceptual puzzle called "curse of natural resources", as the majority of evidence suggests that natural resources-rich countries grow slower than natural resources-poor countries (Dietz , et al., 2007), but the natural resources are free gift of Allah in the form of natural resource deposits, so it should be bless not curse to the economy.

most of important natural resources are concentrated in MENA region countries especially oil and gas. These are one of the most important resources on the earth. It holds more than 60 % of the world's proven oil reserves, mostly located in the Gulf region, and nearly half of global gas reserves. Not surprisingly, oil represents close to 85 % of the merchandise exports of the region, making it highly susceptible to volatility in international prices.

So, this study concentrates on the structure of natural resources in MENA countries, and in addition trying to answer the question of whether the countries of the region are exploiting the proceeds of these natural resources in increasing investment in infrastructure projects. To achieve this, the study relied on a range of different graphic methods. After the theoretical rooting of natural resources definitions, classifications, and importance of these natural resources in economic thought and previous theoretical and applied literature.

Problem settlement
The study tried to discover the efficient and sustain use of natural resources, to avoid environmental degradation, also concentrate in MENA region countries.
> The questions this study raises are the following:
> - whether the countries of the MENA region are exploiting the proceeds of these natural resources in increasing investment in infrastructure projects?

- How can we make best use of natural resources, or turning it to bless for society rather than curse?
- What are the major causes of environmental degradation?

Objectives of the Research:

Describing the available natural resources and its various types and classifications, then determine the rational use of natural resources to avoid environmental degradation, also explain the concept of natural resource curse its causes and how to overcome this problem.

Survey the structure of natural resources in MENA region. Then determine if these countries exploitation these resources in right way or not.

Research Hypotheses:

the countries of the MENA region considered to be exporters of natural resources in its raw form.

Methodology

This study will use *indicative approach* This approach depends on analysis or descriptive method to make a theoretical rooting of natural resources definitions, classifications, and importance of these natural resources in economic thought and previous theoretical and applied literature.

Then use graphical analysis to study and compare the abundance of natural resources in MENA countries, and the structure of these natural resources.

1. Definitions and Classification of Natural Resources

Natural resources (NR) are the back bone of every economy, as it provides two basic functions: the first play as a raw material for production of good and service, and the second is a raw material for environmental service.

So, it is important to understand the concept of Natural resources (NR), so this section will provide a broad overview of the Natural resources (NR), by illustrate definitions and key features of Natural resources, classification of Natural resources, indicators of Natural resources, and at the end the importance of it.

1.1 Definition of Natural Resources and key features

- NR are natural assets row materials accruing in nature that can be used for economic production or consumption' so it is naturally occurring assets that provide use benefit through the provision of raw materials and energy used in economic activity and that are subject primarily to quantitation depletion through human use (Rajovic goran, 2017).

- NR are materials that come directly from nature and are used to produce goods and services, examples include tree, water, soil, cool and animals. Natural resources are gifts from nature, they are present without human intervention. as all raw materials used in production originally came from nature resource (Turner Lis, 2008).

  There are many definitions of NR, but the most suitable definition to the study is that NR are the resources that exist without action of human kind and include all valued characteristics, as it is all materials and components that can be found within the environments.

Features of Natural Resources

This point provides an overview of some unique features of NR, as these features pose special challenge to their effective management. These features are:

- Exhaustibility
- Uneven distribution across community
- Negative externalities
- Price volatility
- Substitutability
- Irreversibility

1.2 Classification of Natural Resources

In classifying NR it's not easy to draw a clear line between the kind of Natural Resources, as there are no clear guide lines or rules for classifying NR.

There are deferent strategies of categorizing NR, these incorporate:

- Source of origin
- Stage of development
- Renewability
- ownership

1.2.1 Source of Origin

According to the source of origin NR. Might be isolated under two types: biotic and abiotic

Biotic
Biotic resources are gotten from the bio-sphere (living and organic or natural material), such as livestock and forests, human being and fisheries, and the materials that can be gotten from them, like fossil fuel, petroleum as these are formed from decayed organic matter (lujalapdivi, 2003).

Abiotic
Biotic resources are those come from non-organic or nonliving fabric, cases of abiotic resources incorporate land, rocks, water, air, metals, like gold, copper, silver, Etc (lujalapdivi, 2003).

1.2.2 Stage of Development

On the basis of stage development of resources, it has:
- Potential resources
- Developed or actual resources
- Reserve resources
- stock resources

Potential Resources
Are those that exist in a local, and may be utilized in the future. For case petroleum happen with sedimentary rocks in different regions but until the time it is really penetrated out and put into utilized, it remains a potential resource.

Develop or Actual Resources
Are those that have been surveyed, their quantity and quality determined and are being utilized now. the improvement of an actual resources like wood handling depends upon the innovation accessible and the cost involved (Report, 2010).

Reserve Resources

the portion of an actual resources which can be created productivity in the future, mean can be used for future necessitates like forests, water in lakes...etc. it is a save which can be utilized in the future.

Stocks Resources

the materials in the environment which have potential to full fill human needs but human being don't have the innovation to get to these, it includes among stocks, water for illustration is a compound of two inflammable gases hydrogen and oxygen which can utilized as a source of energy but we have not technology to use them.

1.2.3 Renewability

economist often categorized NR in to renewable and non-renewable resources

Renewable Resources

can be replenished naturally, mean can be reproduced by physical, mechanical of chemical processes, also their quantity is not affected by human consumption such as sunlight, wind, water and air.

in spite of the fact that numerous renewable resources don't have such a quick recovery rate. those resources are vulnerable to depletion by over use.

any resources may be renewable if the rate of recovery exceed the rate of consumption mean they replenished (Renewable, 2017).

Non-Renewable Resources

these resources are form slowly take long geological period and don't naturally form or shape in the environment.

minerals are the most common resource included in this category by the human view point, resources are non-renewable when their rate of consumption or utilization surpasses the rate of recovery, a great illustration of this are fossil fuels, which are in this category since their rate of arrangement is extreme (Rajovic goran, 2017).

1.2.4 ownership

classification depends on ownership have (Report, 2010):

- ➤ individual
- ➤ community
- ➤ national
- ➤ international

this classification is motivated from socioeconomic outline, or classification of natural wealth, specially the metal, sand and minerals found in these pieces of land also belong to concerned owner.

- **Individual Resources**

these are resources claimed by people privately. example, land claimed by agriculturist designated to them by government against the installment of revenue.

urban individuals possess plots, houses and other property a few other cases include plantation, fields, lands and lakes.

- **Community Resources**

these incorporate resources that are a valuable to all the members of the community like the town lakes, public parks and play areas in urban ranges are available to all the individuals living there

- **National Resources**

in fact, talking all the resources have a place to the nation because the nation has a lawful power to secure indeed private property for public good, this we may have seen numerous times when government take fields claimed by private people to construct streets and rail roads.

- **International Resources**

these are the regulating resources like some places that no person nation can utilize these without the agreement of the international institutions.

The next figure will summarize the classification of natural resources

Figure 1-1classification of Natural Resources

Classifications of Natural Resources

Source of origin	Stage of development	Renewability	ownership
Biotic Abiotic	Potential Actual Reserve Stock	Renewable Non-renewable	Individual Community National International
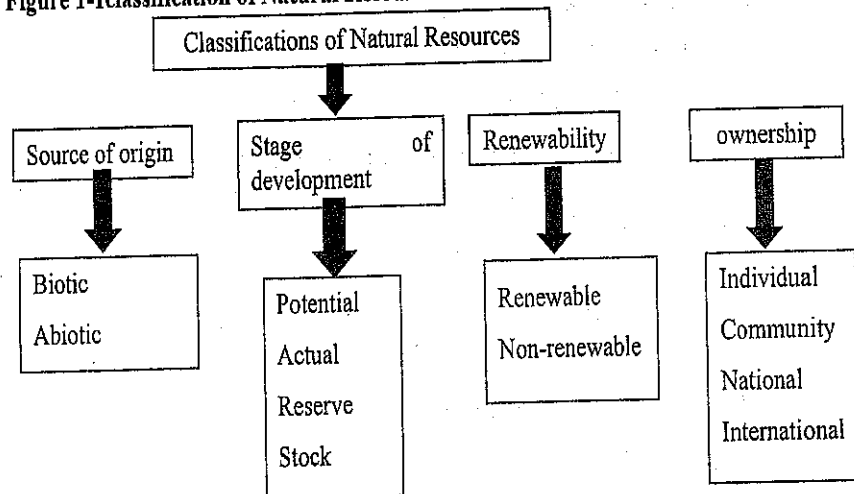
1.3   Indicators of Natural Resources

there are numerous indicators of Natural Resources, these indictors differ according to the use of NR and associated affects also differ among the agencies produce it.

there are indicators related to water, land area, energy and resources categories materials.

this point will illustrate some indicators of NR from the most famous agencies and reports.

1.3.1   World Bank

the world bank talking about the NR in different indicators like:

- agriculture land (% of land area)
- annual fresh water withdrawals total (% of international resources)
- forest area (% of land area)
- renewable energy consumption (% of total final energy consumption)
- 5-total greenhouse gas emissions
- total NR rents (% of GDP)
- air transport, registered carrier departures world wide
- CO_2 emissions (metric tons per capital) (Bank, 2018)

1.3.2 Statistics Canada Indicator

- volume of NR productions (real NR gross domestic product)
- NR prices
- export and import volume of NR
- employment in NR (Canada, 2017).

1.3.3   Renewables 2017

- new investment (annual) in renewable power and fuels.
- renewable power capacity
- hydropower capacity
- bio-power capacity
- wind power capacity
- solar hot water capacity (Renewable, 2017)

1.3.4 European Environment Agency

- agriculture land

- urban land take
- forest utilization
- marine fish stocks
- surface waters
- resource efficiency
- fresh water use
- greenhouse gas emissions (European environmental agency, 2017)

1.4 Importance of Natural Resources

the economic importance of NR depends upon the size of two fundamental factors: current flows of income and potential future flows of income. the first is the great a function of production costs and market demand. and the second is the abundance of NR and management of it .so we have to take both current and future flows of income in account to understand the importance of NR. and how it contributes to sustainable economic development over the time.

this point will summarize the importance of NR in the next element:(OECD,2011)

- fiscal revenue, income and alleviation of poverty
- creating jobs and employment
- esteem of ecosystem administrations (OECD, 2011)

2. Depletion of Natural Resources

Depletion of natural resources is the most important problem facing natural resources, and threat the world as a hole.so this section will illustrate the definitions of natural resources depletion, and the causes of it, then explain the effects of that depletion, after that portray the indicator and estimation of it, then provide the most important nature resources and the most valuable to depletion, then how to use natural resources in sustainable way, and at the end how to protect natural resources against depletion.

2.1 Definitions of Natural Resources Depletions

If natural resources are misused or overused, they may not be available in the future.so That means utilization of Natural Resources speedier than it can be renewed. Also mean the consumption of Natural Resources faster than it can be replenished (M., et al., 2010)

2.2 Causes of Natural Resources Depletions

- There are a lot of causes of Natural Resources depletions; the most common causes are;
- Overuse/Irrational use

- Non-equitable distribution of resources
- Aquifer depletion
- Mining for fossil fuels and minerals
- Overconsumption, excessive or unnecessary use of resources
- Overpopulation
- Pollution or contamination of resources
- Slash-and-burn agricultural practices, currently occurring in many developing countries
- Soil erosion
- Technological and industrial development
- Deforestation

2.3 Effect of Natural Resources Depletions

We as a whole realize that our Natural Resources are restricted. Throughout the years, in light of mindful unplanned activities, for example, abuse and misuse of resources have caused difficult problems for the humankind. So, the exhaustion of these resources is causing genuine antagonistic impacts on us and additionally on nature itself. The accompanying are the evil impacts or effects caused by their consumption on us and the nature (mariagnes jouanjean, 2014):

- Imbalance in nature and loss of biodiversity
- Effects on human health
- Shortage of materials
- poverty
- Atmosphere changes
- Struggle for existence
- Slackening of Economic growth

2.4 Natural Resource Efficiency (Sustainability)

Efficiency use of natural resource is a basic cause to achieve sustainable natural resource, and then protect natural resource from depletion. *Resource efficiency*, which measures the economic value produced per unit of natural resources.

The world economy today utilizes around 30% less natural resource to produce one Dollar of GDP than 30 years prior, that mean the resource efficiency has improved from the past. That can be illustrate by next figure

Figure 2-1:resource efficiency
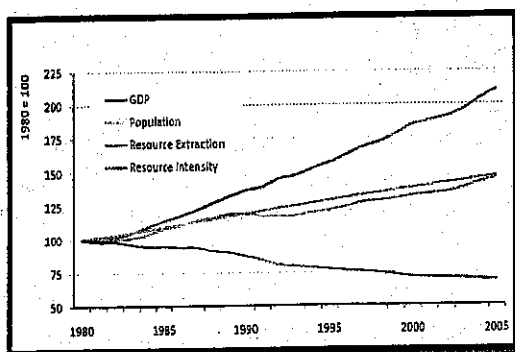
source: friend of the earth 2010

the graph illustrates that overall resource extraction developed by around half somewhere in the range of 1980 and 2005, developing resource extraction was closely related with worldwide development in population. also, Gross domestic product (GDP) expanded by 110% in the same time period, so there is a positive trend which mean there is a resource efficiency in this period (earth, 2010).

Resource efficiency differs significantly among world nations, which depend upon several factors like:

- The sorts and sums of resources accessible in the diverse world regions.
- The imports and exports of resources.
- The technologies and innovations and in addition their financial structure.
- The most economic activities contribute in GDP.

3. Natural Resource Curse Hypothesis

The resource curse represents a puzzle since the free gift of nature in the form of natural resource deposits should be a blessing, not a curse to the economy but unexpectedly it become curse.

So, this section will illustrate the definition of natural resources curse, natural resources curse theory, and then the effects of natural resources curse.

3.1   The Definition of Natural Resources Curse

The resource curse, also known as the paradox of plenty, refers to the paradox that countries with an abundance of natural resources (like petroleum or fossil fuels and certain minerals), have

a tendency to have less economic growth, less democracy, and worse development outcomes than countries with less natural resources (Anthony, 2016).

The term resource curse was first utilized by Richard Auty in 1993 to portray how nations wealthy in mineral resources were not able utilize that riches to support their economies and how, illogically, these nations had lower economic growth than nations without an abundance of natural resources. A powerful examination by Jeffrey Sachs and Andrew Warner found a solid relationship between natural resource abundance and poor economic growth (Sachs & Warner, 1995).

The IMF arranges 51 countries as "resource rich." These are nations which collect at least 20% of exports or 20% of monetary income from nonrenewable natural resources. 29 of these countries are low-and lower-center income. Basic qualities and characteristics of these 29 countries incorporate:

- Extraordinary reliance on resource abundance for monetary incomes, exports, or both.
- Low saving rates.
- Poor development performance.
- Very unstable resource revenues (Anthony, 2016).

There are numerous hypotheses or theories and much debate about the reasons and exceptions to these adverse outcomes. Most specialists trust the resource curse is not universal or unavoidable, however influences certain kinds of countries or areas under certain conditions. (Michael, 2015)

3.2 Natural Resources Curse Theory

There is a lack of an internationally accepted theory of the curse of natural resources. Most current clarifications for the curse have a crowding-out rationale.

The next section will illustrate the most famous theories about curse of natural resources:
- Dutch disease
- Rentier state
- Rent-seeking (John, 2011)

3.2.1   Dutch disease

The term was begat in 1977 by The Economist to portray the decrease of the manufacturing sector in the Netherlands after the disclosure of the huge Groningen gaseous petrol field in 1959 (Hunt Allcott, 2018).

Dutch disease is the clear causal connection between the expansion in the economic development of a particular sector (for instance natural resources) and a decrease in other sectors (like the manufacturing sector or agriculture).

Refers to the adverse effects through real exchange rate appreciation. The mechanism is that as revenues increment in the growing sector (or inflows of foreign aid), the given country's currency becomes stronger (appreciates) contrasted with currency of different countries (exchange rate). This outcome in the country's other exports becoming more expensive for other countries to purchase, and imports getting to be less expensive, making those sectors less competitive (Corden, 2012)

3.2.2   Rentier State

The rentier state is familiar concept in International Political Economy (IPE), that mean a state which determines all or a significant segment of its national incomes or revenues from the rent of indigenous resources to outside customers. This hypothesis was first proposed by Hossein Mahdavy in 1970.

Rentier states may create rents by controlling the worldwide political and economic environment (Hossein, 1970).

Hazem Al Beblawi and Giacomo Luciani proposed four attributes of a rentier state:

- Rent circumstances prevail.
- The economy depends on a substantial outside rent – and in this way does not require a domestic productive sector.
- Just a little extent of the working populace is really engaged with the generation of the rent.
- The state's government is the primary beneficiary of the external rent (Beblaw Hazem Al, 1990).

So, a rentier state moves beyond the model of Dutch Disease, by attempting to endogenies policy-making and institutional arrangement. Specifically, they attempt to clarify why state leaders or decision-makers in natural resource-rich economies make and keep up growth-restricting policies (Jonathan, 2010).

3.2.3 Rent-seeking

Rent-seeking was created by Gordon Tullock in 1967, while the expression rent-seeking itself was authored in 1974 by Anne Krueger.

In economics, rent-seeking includes trying to increase one's share of existing wealth without creating new wealth. Rent-seeking results in lessened economic efficiency through poor distribution of resources, decreased actual riches creation, lost government income, expanded income inequality (Norris Dabla Era, 2014).

The essential thought behind the rent seeking model is that there are significant expenses to the workings of an economy when the allocation of resources is diverted principally through state pioneers or leaders, who have discretionary authority, instead of through deals between private economic agents. In oil economies, in light of the fact that most incomes or revenues start in the central government, the level of state tact in allocating resources and directing the economy have a tendency to be higher than in most non-oil economies (Jonathan, 2010).

4. Natural Resource Structure in The MENA Region

In this section, a survey will be carried out to identify the status and structure of natural resources in the MENA region through the use of table comparisons and graphical analyzes of Bar and line graphs during the period (1970-2017) for all MENA region counties represented by (23) countries. Here, the state of natural resources in these countries will be assessed primarily by the total natural resource rent index (as a percentage of GDP), since it is an original indicator that reflects the level of abundance. increase the proportion of natural resource revenues from the GDP, mean that this country has abundance of natural resources, which mean the higher the proportion of natural resource revenues from the country's output, the more abundant natural resource in this country and vice versa.

Accordingly, the following figure (4-1) shows the ratio of natural resource revenues from the GDP of the MENA countries as an average of 48 years (2017-1970) in order to summarize the situation of natural resources in the countries of the region by ranking the countries of the region in descending order according to the proceeds of their natural resources revenues as follows:

Figure 4-1Average proportion of natural resource revenue from GDP in the MENA region for the period (2017-1970)
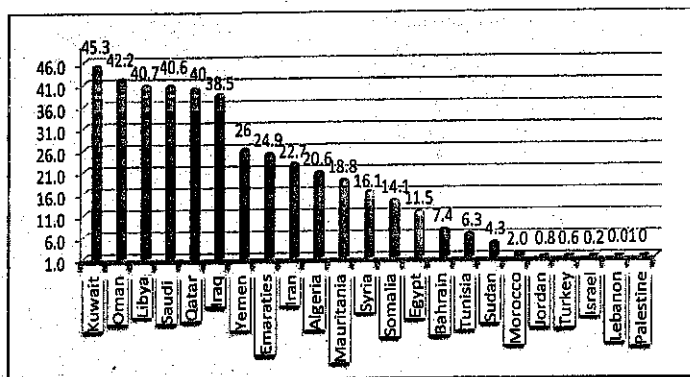
Self-work, data from world bank

From the previous figure, it is clear that most of the countries in the MENA region are characterized by a great abundance of natural resources, with the exception of five countries, namely Jordan, Turkey, Israel, Lebanon and Palestine, which did not exceed the average revenues of natural resources 1% of their GDP during the period. The rest of the countries range from countries with an average natural resource revenue of more than 40% of output, led by Kuwait, Oman, Libya, Saudi Arabia and Qatar. Iraq is approaching them by 38.5%. other countries with an average revenue from natural resources is (20%-30%) of output, headed by Yemen. And Countries with an average resource revenue of between (10% -19%) of the output, led by Mauritania, and Egypt at the bottom of 11.5% of the output. Finally, countries ranging from (2%-9%) of output are Bahrain with 7.4%, Tunisia 6.3%, Sudan 4.3%, and Morocco 2%.

Although this figure summarizes the question of the abundance or scarcity of natural resources in the MENA region countries, it does not show us what the structure of these available natural resources is, whether the abundance of natural resources in those countries is due to the abundance of oil, natural gas, coal, minerals, forests or others. The following table (4-1) was created to show us the revenue of natural resources as a proportion of the GDP of all the countries of the region in 2017, as well as the income of each of the five natural resources as a proportion of GDP as follows:

Table 4-1: MENA region natural resource revenue structure for 2017

Countries		Total natural resources rents (% of GDP)	Components of natural resources rents (% of GDP)				
			Oil	Natural gas	Coal	Mineral	Forest
Abundant resources	Libya	38.47	37.29	1.07	0	0	0.11
	Iraq	37.98	37.78	0.19	0	0.00003	0.01
	Kuwait	37.14	36.61	0.53	0	0	0.001
	Mauritani	24.12	0.81	0	0	20.25	3.05
	Saudi	23.76	23.10	0.57	0	0.08	0.001
	Oman	23.49	21.80	1.63	0	0.05	0.002
	Qatar	17.95	14.23	3.71	0	0	0.0001
	Iran	17.78	15.34	1.74	0.01	0.68	0.01
	Somalia	15.18	0	0	0	0	15.18
	Algeria	14.71	12.31	2.18	0	0.05	0.16
	Emirates	13.69	13.13	0.56	0	0	0.0002
Moderate	Egypt	5.40	4.08	0.74	0	0.34	0.25
	Sudan	4.62	1.01	0	0	2.54	2.43
	Bahrain	3.52	2.01	1.50	0	0	0.001
	Tunisia	2.41	1.55	0.20	0	0.34	0.32
Scarcity resources	Yemen	1.95	1.89	0.001	0	0	0.06
	Morocco	1.63	0.01	0.002	0	1.40	0.22
	Jordan	0.73	0.001	0.009	0	0.69	0.03
	Turkey	0.36	0.06	0.003	0.03	0.21	0.06
	Israel	0.14	0.002	0.10	0	0.04	0.0001
	Lebanon	0.001	0	0	0	0	0.001
	Palestine	0	0	0	0	0	0
	Syria	-	-	-	-	-	-

Self-work, data from world bank

It is clear from the previous table at first glance that the abundance of natural resources in the countries of the MENA region is primarily due to the abundance of the oil resource and, to a lesser extent, to the abundance of the natural gas resource. This represents a significant proportion of the total revenue of natural resources in only five countries: Qatar, Algeria, Iran, Oman and Bahrain. These five countries represent the only regional countries with abundant natural gas resources besides the oil supplier. Mauritania and Somalia are excluded from these abundant natural resources as a result of the return of the abundance of natural resources in Mauritania to

their mineral wealth, while the abundance of natural resources in Somalia is 100% due to the forest resource. As for the countries in the region that have a scarcity of natural resources, despite their limited natural resources, these limited resources are primarily due to mineral resources in Morocco, Jordan and Turkey. And to natural gas in Israel. And finally, to the forests of Lebanon. As for Palestine, where the proceeds of natural resources do not constitute anything of its GDP, this is due to the fact that it has been under Israeli occupation since 1948, which prevents it from exploiting any natural resources available to it.

Yemen appeared in 2017 with a group of countries with a scarcity of natural resources, despite its previous figure (4-1) with a group of countries with an abundance of natural resources. This is due to political tensions and civil war in Yemen since 2015, which has led to the closure of Yemen's airspace and sea since then, and consequently its inability to export its natural resources, which led to a sharp decline in the revenues of natural resources in Yemen from 20% in 2014 to less than 2% since 2015. However, under normal circumstances, Yemen will not differ much from most of the countries in the region, whose natural resources are only due to the oil supplier. Accordingly, based on the previous schedule, we could replace the term " natural resource abundance " in the MENA region with the term "abundant oil resource" in the region.

Moving on to the next figure (4-2), which shows the temporal evolution of the abundance or scarcity of natural resources in the MENA region during the period of data analysis instead of the previous figure (4-1), which shows only the average period. This is to know the extent of developments or changes in the level of abundance of natural resources in the countries of the region in different economic periods.

Figure 4-2: Total natural resource revenue as a proportion of GDP in the MENA region improved during the period (1970-2017)
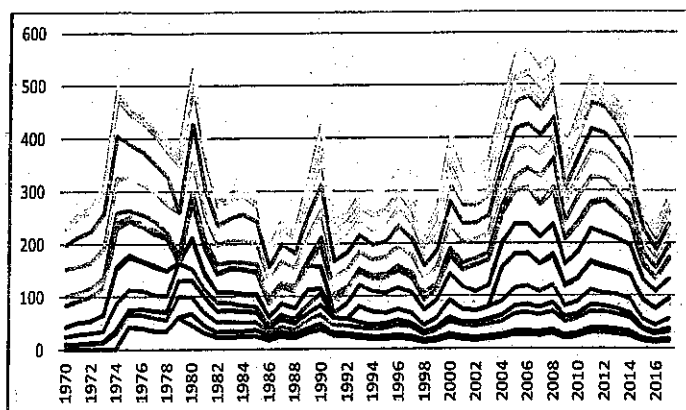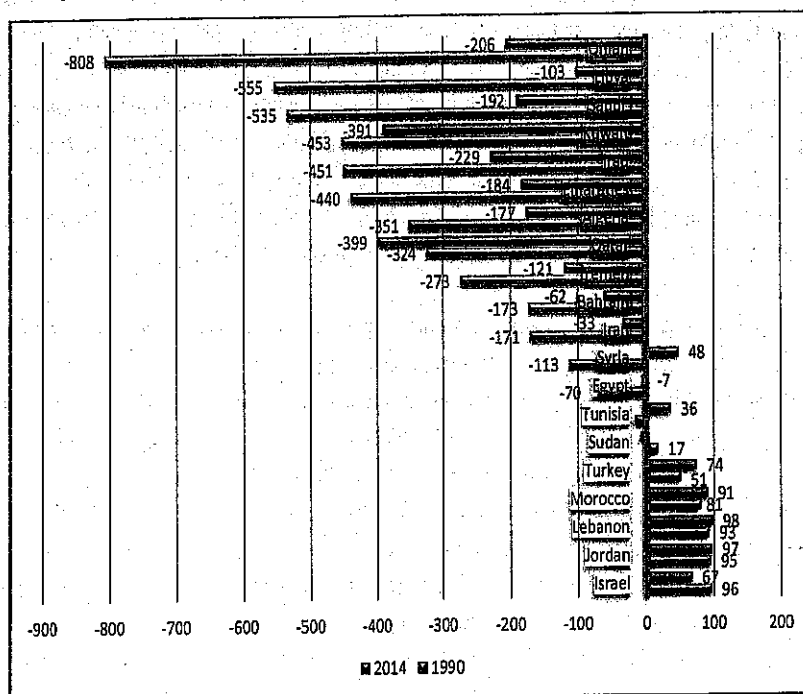
Self-work, data from world bank

At first glance, despite the complexity of this format, it contains twenty-two lines that reflect the temporal development of total natural resource revenues as a proportion of GDP for all countries of the region (excluding Palestine). But it gives an important indication as we note from the form that no line of temporal development of any country intersects with other countries, but on the contrary we find that the temporal development of the level of abundance or scarcity of natural resources of all the countries of the region takes the same form. All the countries of the region are subject to the same changes in the level of abundance of natural resources, either up or down, with no country that exceeds the other country, the highest in abundance. Thus, in addition to what is available in Figure (4-2) of the clarification of the extent of development occurred in the level of abundance in the region, it can also be used in the order of the level of the countries of the MENA region in the natural resources abundance, whether ascending or descending, such as the previous figure (4-1). The constant level of changes in the abundance of natural resources in the countries of the region is due to the analysis of the structure of natural resources in the region by the previous Table (4-1), that the abundance of natural resources in the MENA region is due to the abundance of energy resources (oil and gas) so that the term can be replaced The abundance of natural resources in the Territory to the abundance of energy resources in the Territory. Since all the countries abundant in the region's natural resources are OPEC members, they are therefore subject to the same production changes, either by increase or decrease, depending on the quota set by OPEC.

As a result of the confirmation that the abundance of natural resources in the MENA region is due to the energy resources abundance, the status of natural resources in these countries will

be assessed by an alternative measure of abundance but only for fossil fuels, which is *Net Energy Imports* (as a proportion of total energy consumption) during the period (1990-2014). The lower the net energy imports as a proportion of total energy consumption, the greater the reliance on domestic energy resources. The greater the level of energy resources abundance in the country, even if the value of the index turns to negative whenever it reflects that the state has become a net exporter of energy resources. Thus, this indicator is given the opposite meaning of the index of total natural resources revenues, that mean the higher the value of this indicator, the lower the amount of energy resources in the country, and vice versa.

Figure 4-3: Net Energy Imports as a proportion of energy consumption in the MENA region during the period (1990-2014)

self-work, data from world bank

Here, the significance of the results of the figure (4-3) was no different from those of the previous two forms (4-1), (4-2). Where observed that during the period (1990-2014) all the countries of the region are considered a net source of energy in varying proportions depending on their oil and gas reserves. With the exception of only five countries: Turkey, Morocco,
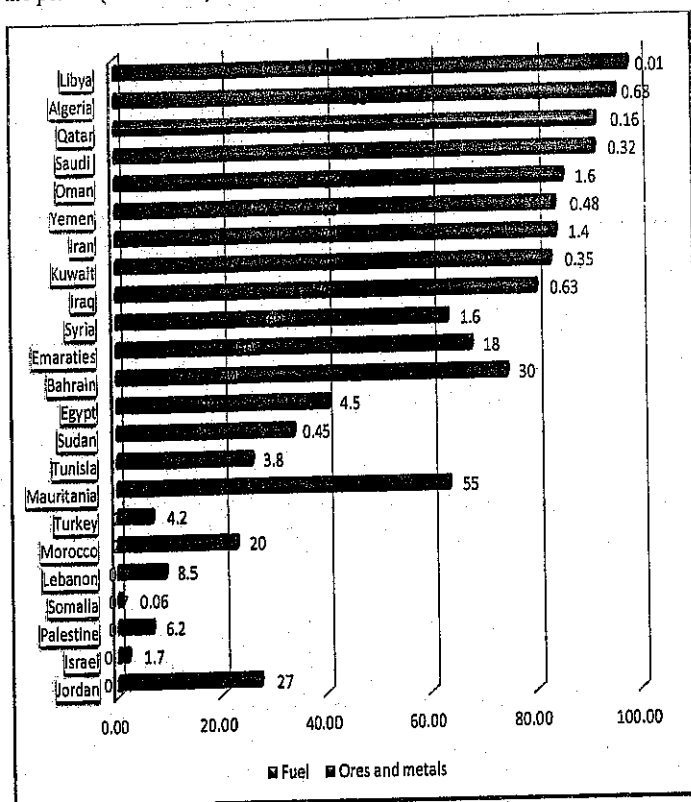
Lebanon, Jordan, and Israel. Each country is a raw importer of energy resources during the period. also noted that the change in Sudan's position from a net energy importer until 1998 to a net source of energy as a result of the emergence of major oil discoveries in Sudan, making it a country rich in energy resources. In contrast, Tunisia's position changed from a net source of energy until 1997 to a net energy importer due to the decline in its natural resource reserves and the absence of new oil discoveries. Finally, there has been a temporary change in Syria as a result of conflicts and civil war, from a net source of energy to an importer since 2012.

With regard to the development of the level of energy exports and imports during the period, it was observed that all the countries in the region, which are considered a raw source of energy, have reduced their exports of energy resources as a proportion of their domestic consumption, excluding Qatar, which increased its energy exports from 324% of domestic consumption in 1990 to 399% in 2014. This may be due to the fact that it is the largest country in the region has abundant in the natural gas supplier, which is not governed by export agreements like oil exports, which allows it to increase its exports by significant proportions. As for the five countries in the region importing energy supplies, noted that the increase in the volume of energy imports during the period, excluding Israel, whose imports decreased from 96% of its domestic consumption in 1990 to 67% in 2014, and may be due to the large discoveries of natural gas achieved by Israel in the Eastern Mediterranean.

It should be noted that the decline in energy exports in the countries of the region as a proportion of their domestic consumption does not mean a decrease in the volume of their oil exports (estimated in barrels of oil), but is due to the increase in the population of the countries of the region, with the increase in the levels of well-being significantly in most oil countries (Gulf states), and consequently the increase in the level of Highly domestic energy consumption.

Finally, the structure of goods exports in the MENA region will be analyzed by examining the proportion of fuel exports, mineral exports and substrates of total commodity exports in the region as an average for the period (1970-2017). In order to answer the question, are the states of the MENA region considered to be exporters of natural resources in their raw form or in the form of manufactured goods (intermediate or final). Any knowledge of whether the economic structures of the MENA countries are still lagging behind and depend on the proceeds from raw resources exports such as most of sub-Saharan Africa, or their advanced economic and productivity structures are exploit the abundance of their natural resources in industrial production such as most countries of the developed world and some Developing countries such as India, China, Indonesia, and Brazil.

Figure 4-4: Average exports of fuel, pillars and minerals (% of goods exports) in the MENA region for the period (1970-2017)

Libya | 0.01
Algeria | 0.68
Qatar | 0.16
Saudi | 0.32
Oman | 1.6
Yemen | 0.48
Iran | 1.4
Kuwait | 0.35
Iraq | 0.63
Syria | 1.6
Emaraties | 18
Bahrain | 30
Egypt | 4.5
Sudan | 0.45
Tunisia | 3.8
Mauritania | 55
Turkey | 4.2
Morocco | 20
Lebanon | 8.5
Somalia | 0.06
Palestine | 6.2
Israel | 1.7
Jordan | 27

■ Fuel ■ Ores and metals

Self-work, data from world bank

noted that the analysis of the structure of goods exports in the region is limited to figure (4-4) on fuel exports (oil, gas) and mineral exports only. This is the result of a lack of metrics on coal and forest (wood) exports. Coal and forests are rare resources in the region and their impact on total exports is also ineffectual.

From the point of view, the countries of the MENA region are still rent-dependent countries dependent on the export revenues of natural resources in their raw form, and their economic and productive structures have not evolved to exploit these natural resources in industry. this appears in the proportion of raw natural resources exports from total goods exports. By matching the previous figure (4-4) in the previous form (4-1), noted that the higher the abundance of natural

resources in the country which expressed by the proportion of natural resources revenues as a percentage of GDP, the higher the exports of natural resources in their raw form as a proportion of the total exports of goods. Consequently, the proportion of exports of raw natural resources exceeds 80% of the total exports of goods in nine countries, and exceeds 60% in four countries, and finally exceeds 20% in five countries. whether the countries with a scarcity of natural resources are Turkey, Israel, Lebanon and Palestine, noted that the volume of exports of raw natural resources did not exceed 9% of the total exports of goods.

Two countries are excluded from this rule, the first of which is the abundant natural resources, Somalia, as a result of the return of its abundance to forests, which require special infrastructure to be exploited and exported, which are not available in Somalia as a result of long-standing armed conflicts. The second country is one of the countries with scarce resources, Jordan, where we note the high share of its exports of its rare natural resources in total exports of goods, accounting for 27%. This reflects the decline in the volume of its exports of goods mainly. Finally, noted from the figure the control of fuel exports on the structure of natural resource exports in the countries of the region, and that the exports of ores and minerals constitute a significant proportion in the structure of natural resource exports only in five countries are respectively Mauritania, Bahrain, Jordan, Morocco, and finally U.A.E.

CONCLUSION

It is an established fact that there exists a vital relation between environment and life. So natural resources are very important to our survive. As Human beings, in their quest of faster economic growth, are upsetting the environmental equilibrium and destroying their life-support system. Their capability to transform the environment can bring the benefits of economic development and an opportunity to enhance the quality of life. In any case similar power, when incorrectly applied, can also cause harm to the natural environment and consequently to human life itself.

From the previous point it's clear that the natural resources are very important so this study illustrate the definitions, classifications, indicators, and importance of natural resources. Also, how to manage the use of natural resources, and achieve the rational use of it, and how conserve these resources. Then explained natural resources curse hypothesis

The study proves that the abundance of natural resources in the MENA countries is almost entirely due to the abundance of energy resources (oil and gas). The real wealth structure in the MENA countries is primarily due to net national savings. Therefore, since the abundance of energy resources provides most of the MENA countries with very large dollar returns for the export of those resources, with the low size of the population in most of those countries, this is

reflected in the achievement of huge dollar surpluses that enter sovereign funds to invest those surpluses both at home and abroad.

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