

Economics of Oil in Developing Countries between the Dutch Disease and the Norwegian Experience: An Empirical Study on Saudi Economy

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Abstract:

The present study was conducted to identify the challenges facing the Saudi economy, which delay and prevent its progress and development, and the extent of the relationship of these challenges to the Dutch disease; this study also probes into the possibility of using the Norwegian experience to tackle these challenges. The researcher utilized the historical, descriptive, analytical and inductive approach to achieve the objectives of the study through the study of the concept of the Dutch disease, the reasons for its emergence, oil experience of Norway, and then the experience of the Saudi economy.

This study concluded that the most important challenge facing the Saudi economy is its dependence only on oil, so that the aspects of Dutch disease mostly apply to the Saudi economy, and that the Norwegian experience is no longer in some respects appropriate for tackling the Saudi economy at the moment. The present study recommended diversifying the Saudi economy, reconsidering policies of energy subsidies and developing funds to consolidate the economic stabilization process.

Keywords: oil economics, Dutch disease, Norwegian experience, Saudi economy

Introduction

Although Saudi Arabia has been a producer and exporter of oil for decades, the Saudi economy is still dependent on oil as a key subsidy of the national income and the top of the Kingdom's exports, along with obvious and persistent shortage in the productive capacity in agriculture and industry. All these phenomena confirm the spread of the so-called Dutch disease, which is an economic situation, hit the Netherlands in the early stages of the exploitation of its oil. However the Netherlands recovered from this disease, and has now become one of the best ten economic countries in the world, Saudi Arabia is still suffering from this disease, despite its endeavors to take advantage of the Norwegian experience (which is considered a model for successful economy of oil that put Norway in the forefront of countries with world economic prosperity), where the Kingdom has developed plans and programs to avoid Dutch disease, some of these plans has succeeded in developing of economic activity in the services sector, but failed to make the agricultural sector contribute to the national income and exports, or at least to cover domestic demand for agricultural commodities. Industry, in KSA, is a servant of the oil industry (Petrochemicals) and is not integrated with the agriculture industry.

Problem statement:

The following questions sum up the problem of the study:

1. What are the key reasons for the weakness of the Saudi economy?
2. Does the Saudi economy suffer from Dutch disease?
3. Is the Norwegian experience appropriate for tackling the challenges facing the Saudi economy?

Hypotheses

Since the Kingdom of Saudi Arabia's economy depends primarily on oil commodity as a key resource, the study hypothesizes the following:

1. Weakness of the Saudi economy. Maybe the Saudi economy is suffering from a disease similar to Dutch disease.
2. The Norwegian experience model is a sole solution to tackle the challenges facing the Saudi economy.

Objective

The goal of this study is to try to highlight the challenges facing the Saudi economy and characterization which disallow development; and to what extent these challenges are similar to those of Dutch disease, and whether the Norwegian experience is valid for the tackling these challenges. To what extent the reform attempts for the Saudi economy have succeeded or failed and what are the reasons?

Methodology

The researcher utilized the historical, descriptive, analytical and inductive approach to achieve the objectives of the study. The researcher depends on the sources and scientific references, books and research papers that dealt with the subject.

Literature Review

Many pieces of literature review have dealt with the same subject matter, but from different views other than the one adopted in this study. Ajeemaah (2000) entitled the international economy: theoretical and applied study, Al-Sabah, A. (2007). Economic security issues in the Gulf and the role of the energy sector, the Emirates Center for Studies and Research. Al-Qasim, F. (2010) "How Norway earned the blessing of oil and avoid its curse". Salman, H. (2008). Dutch Disease and the Arab economy (economics) Alkilani, A. (2009). Oil curse, third and final part. Stiglitz (2004). Dutch disease, the resource curse once again, Trans. Publisher Broujet Snicket August 2004. Obaid (2007). Sustainable productive capacity of the Kingdom of Saudi Arabia, Emirates Center for Studies and Research, Abu Dhabi. Virado (2007). Oil and gas industry in Saudi Arabia, Emirates Center for Studies and Research. Yousef (2007). Gulf economic security in an era of globalization, the Emirates Centre for Studies and Research. Nasser (2012). Oil policy, the Nigerian experience. Wikin. Norwegian model experiment. Innovation and culture at the University of Oslo. INSEAD Business School in collaboration with the Embassy of the Kingdom of Norway (2010) Economic Diversification (Norwegian model experiment)

Theoretical Framework

Dutch disease

The term of Dutch disease first appeared in 1977 in the British magazine, The Economist. In economics, the Dutch disease is the apparent causal relationship between the increase in the economic development of a specific sector (for example natural resources) and a decline in other sectors (like the manufacturing sector or agriculture). The Economist coined the term in 1977 to describe the woes of the Dutch economy. Large gas reserves had been discovered in 1959. Dutch exports soared. But, we noticed, there was a contrast between "external health and internal ailments". From 1970 to 1977 unemployment increased from 1.1% to 5.1%. Corporate investment was tumbling. We explained the puzzle by pointing to the high value of the guilder, then the Dutch currency. Gas exports had led to an influx of foreign currency, which increased demand for the guilder and thus made it stronger. That made other parts of the economy less competitive in international markets. That was not the only problem. Gas extraction was (and is) a relatively capital-intensive business, which generated few jobs. And in an attempt to stop the guilder from appreciating too fast, the Dutch kept interest rates low. That prompted investment to rush out of the country, crimping future economic potential (The Economist, 2014)

Oil, like other commodities, is not only a commodity that can be used wisely as far as can be misused. In the second half of the twentieth century, resource curse emerged in each of Mexico, Norway and Azerbaijan for

discoveries of oil or gas in their territories and the Netherlands was in the forefront of these, which was called Dutch disease (Salman, 2008)

The Dutch disease spread in many developing countries that produce natural resource such as oil or natural gas or all of the primary resources such as diamonds, copper, uranium, cotton, coffee, tea and cocoa, etc. (Alkilani, 2009)

Therefore, the Dutch disease emerged in the economy of developing countries that have natural resources, and when these countries produce from its resources, the economic stagnation is happening, rather than increase and recovery, where the countries with large natural resources usually perform worse than countries that do not enjoy such a large amount of resources. (Stiglitz, 2004)

The Norwegian experience

Norway has won the blessing of oil and avoided its curse by taking advantage of the best use of oil in building a robust economy that isn't affected by any rise or fall in oil prices through utilization of the oil wealth in the establishment of infrastructure to diversify its economy. Having proved the existence of oil with ample quantities since 1970, the country turned into a policy of deliberate escalation in exploration operations in order for the country to economically, socially and politically accept the oil industry.

Principles based upon the oil industry in Norway (Al-Qassim, 2005)

The Energy Committee in the Norwegian Parliament announced in 1970 important principles underpinning the oil industry, the principles emphasized on: National control on the decisions related to the oil operations, Providing the country with the necessary needs of energy, Creating new opportunities for oil-based investment, Protecting the environment and contemporary industries from any negative effect that may occur as a result of oil industry, Preventing burning natural gas, The state should observe the balance between national and international goals in terms of oil industry, Establishing national governmental company to undertake state's commercial interests and operational tasks in the oil sector, Enhancing Norwegian activities at international level to introduce the Norway approach in the oil sector, also stressed the need to develop a solid foundation for decision-making in relation to franchising policy and how to use the revenue of the oil, The state alerted that escalating the exploration operations may result in negative effects, and Engaging the national industries in various oil operations.

However, it could be argued that deliberate policy in granting new franchises has helped the state achieve the above mentioned principles because it gave Norwegian industries enough time to get ready for a new era. Consequently Norway succeeded in establishing a modern oil industry in a highly international level.

After four years of developing the principles of the exploitation of oil, the Norwegian government presented Report No. 25/1974 to the parliament, the report expressed the country's fears from the curse of oil, which was discussed in the parliament, where the parliament members emphasized on the need to develop a solid foundation for decision-making in relation to franchising policy and how to use revenues of oil, warning of an escalation in the exploration for fear of negative consequences, and the involvement of the national industry in various oil operations, or indirectly through the use of oil revenues to increase domestic consumption. The Norwegian parliament also emphasized on the need for a comprehensive strategic planning. It also discussed the possible consequences of oil exploitation, and that any escalation in oil operations must be done gradually and on the basis of an elaborate strategic plan (Al-Sabah, 2007)

In 1982, The Norwegian government also assigned a special committee included the finest economists and politicians in the country to discuss the momentum of oil operations and its impact on the national economy and social life in general. In its report in 1983 the Commission recommended that it was possible to increase the oil operations moderately without adversely affecting contemporary industries until the national economy at that time becomes ready to receipt and accept such operations. The Committee also recommended establishing a fund from the oil revenue and separates the oil revenue from domestic consumption at the same time protect the country's economy from the fluctuation in oil prices.

Accordingly in 1990 the supporting fund had been established and took over the task of managing and investing the oil revenue, what is sent to the supporting fund is the total surplus of general budget (including oil and gas

revenues) but not more than 4% in an attempt to preserve the oil revenue and benefits for the next generations (Al-Qassim, 2005)

This means that there is a government agreement based on two basic principles: First, avoiding an increase in domestic consumption that might harm the national economy and industries. Secondly, future generations must have a share in oil revenues.

Norway's strategy for oil industry

The Norwegian strategy for oil industry included: the diagnosis and evaluation of the various regions and survey geological structures for exploration, and adopting a rational policy of granting franchising that springs from the oil policy and national development plans. There were also principles to maximize the value of crude oil in Norway. There is deliberate escalation of oil operations in anticipation of the adoption of rational policies for the use of revenues; the deliberation was one of the main reasons for the success of the Norwegian experience. One of the factors that contributed to the success of the Norwegian experience is the existence of a fair and disinterested government department with a high degree of efficiency and diversification in the oil sector companies, constructive competition between oil companies to obtain new franchising, and direct contribution to the national oil operations and equipment, as there was a rational balance and transparent cooperation between the roles of national and international companies in operation management and achieving optimal ratio to extract oil from reservoirs, with high technical level.

By monitoring and tracking the Norwegian experience, the researcher noted that the State of Norway is an oil country different from the rest of the oil-producing countries, by taking such an important decision not to rely on oil to finance its budget and has cared for fighting inflation, and kept its oil revenues into a fund and withdrawing only 4 % annually to support the budget, and the rest invested for future generations, and does not affect the budget. At the same time, the Norwegian development plans focused on education, technology, and industrial development. Many of the existing sectors based on the knowledge have become new sources of exports, to be a platform for the development of new export sectors away from oil (Wiken, 2010)

The strategies and economics policies adopted and applied by Norway government protected the country's economic from inconstancy of oil prices, controlling inflation, formed large cash reserve in the oil fund, the level of human capacity improved, the industrial sector has improved and a private productive and competitor sector has been formed. (Insead, 2010)

Saudi economy experience

Saudi Arabia is the largest economy in the Middle East, the largest oil producer in the world, its total output in 2004 reached 254 billion US dollars, equivalent to 12.5% of the total world. It has the largest oil reserves in the world; it owns 25% of reserves in the world. KSA represents 30-40% of the total GDP of the Middle East.

The ratio of total oil exports in 1976 was 88% of the total Saudi exports. In 1980, oil exports amounted to 99% of total exports (Masha, 2003)

The average Saudi production of oil is ranged from 9.5 to 9.6 million barrels per day. The Energy Information Administration predicts that Saudi Arabia's production capacity will be 22.5 million barrels per day in 2025. There are in Saudi Arabia, 80 fields and 1,000 wells. The total cumulative crude oil production was 99 billion barrels so far since the start of production in Saudi Arabia, which constitutes 38.1% of the current oil reserves amounting to 260 billion barrels, 14.1% of the existing oil reserves of up to 700 billion barrels and 4. 2% of the oil resources base of up to 900 billion barrels. Saudi Arabia has eight refineries in addition to the one in the neutral zone that refines about 2.1% barrels per day of domestic production, in addition to 750 barrels per day abroad through joint ventures with major international oil companies. The big plan in post-production is the expansion of the Rabigh refinery, which will add 425,000 barrels per day in order to produce 825,000 barrels per day (Obaid, 2007)

Saudi Arabia depends on a sole revenue source, namely oil, so it is obvious that the decline in oil prices, with the dependence on the import of most food commodities and other consumer goods such as cars, furniture, clothing and other lead to higher budget deficit, where Saudi revenues in 1998 were 38.3 billion US dollars and expenditure was 50.40 billion US dollars by deficit amounted to 12.3% and in 1999 the deficit reached 11.70%.

(Oil Journal, 1999) So Saudi Arabia resorted to finance the deficit by withdrawing from foreign reserves and domestic loan (Taher, 1960). For example, the total domestic debt of Saudi Arabia reached 523 million Saudi riyals in 1998, i.e. 1.7% of GDP (Obaid, 2007)

Table (1) Saudi Arabia budget from 1998 to 1999 (in billion US dollars)

| Year | 1998 | | | 1999 | | |
|------|---------|--------------|---------|---------|--------------|---------|
| | Imports | Expenditures | Deficit | Imports | Expenditures | Deficit |
| | 38.30 | 50.40 | 12.3 | 32.30 | 44.00 | 11.70 |

Source: Oil and Arab Cooperation Journal, Volume IV, 1999

As for the health and education indexes, the average life of the individual was 72.4%, and the knowledge index level was 76%, the physical indices recorded 22.053% \$ per capita of GDP per year. This confirms the improved health and educational status in Saudi Arabia compared to global indices. (Nasser, 2012)

Table (2) shows the domestic food provision, where there is a large rise for imports of food and imports of manufactured goods and agricultural products during the nearly two decades, with the slow production of local agriculture, where the imports of food and agricultural goods in 2007 are double of the domestic production of agriculture, local Imports of manufactured goods have increased from 18.0 billion \$ in 1990 to \$ 72.3 billion \$ in 2007. (Tayeb, 2010).

Table (2) Statement of imported goods with domestic production of agriculture (billion dollars)

| Year | Food imports | Imports of manufactured goods | Imports of agricultural production | Domestic agriculture |
|------|--------------|-------------------------------|------------------------------------|----------------------|
| 1990 | 3.3 | 18.2 | 3.5 | 7.6 |
| 1995 | 4.5 | 20.7 | 4.9 | 8.5 |
| 2000 | 5.4 | 22.1 | 5.7 | 9.3 |
| 2004 | 6.6 | 34.9 | 7.0 | 9.8 |
| 2007 | 11.8 | 72.3 | 12.5 | 10.2 |

Source: World Bank, Development Indicators, 2007

The total consumption was reflected on the exchange rate and inflation, as shown in the table given below

Table (3) Consumption and exchange rate in Saudi Arabia (US \$ million)

| Year | 1992 | 1995 | 1998 | 2000 | 2004 | 2007 | |
|-----------|---------------|-------|-------|-------|-------|-------|-------|
| Statement | Consumption | 729.2 | 732.5 | 841.9 | 884.5 | 903.0 | 968.6 |
| | Exchange rate | 2.72 | 2.72 | 2.72 | 3.75 | 3.75 | 3.75 |
| | Inflation | 3.10 | 5.80 | 13.9 | 11.6 | 10.8 | 4.10 |

Source: World Bank Development Indicators 2007

The exchange rate affects consumption, as an increase in the exchange rate increases the prices of imported goods, which reduces consumption by people with limited income, or an increase in expenditure for those with higher incomes, and this is what happened of the economy of Saudi Arabia, where total consumption increased due to an increased exchange rate as in table (3) shown above. Sudden wealth, simulation, imitation and adoption of consuming ethics and culture, as well as abandoning the culture of Islam with regard to extravagance, all these factors contributed to an increase in the mount of consumption and thus the demand is increasing for foreign goods.

In spite of the successive increase for national income and income increase per capita over the years, as shown in table (4) given below, the increase in employment is disproportionate to the population which means that there may be a blatant unemployment in Saudi Arabia. According to the Cambridge Foundation estimates; the Saudi population has increased twice during the period 1980 - 2000. In spite of the slowdown in the annual population growth rate from 4.2% in the late nineties to 3.2% in 2004, it is expected that the population doubles again for up to 33 million in 2020.

Table (4) National income, income per capita, population and labor force

| Year | 1990 | 1995 | 2000 | 2004 | 2007 |
|------------------------------|------|------|------|-------|-------|
| National income (\$ million) | 1248 | 1453 | 1889 | 2508 | 3832 |
| Income per capita (dollar) | 7220 | 7850 | 8140 | 10810 | 15500 |
| Labor force (Thousand) | 510 | 590 | 670 | 790 | 880 |

Source: Data of United Nations Statistical Report and the World Bank, 2007

The weakness of domestic production led to a slowdown in the growth of the domestic economy (especially agriculture and complementary industry) which is the main reason for rising unemployment that led to greater dependence on imports, and the deepening of economic dependency, all these are considered the challenges of Dutch disease. Saudi Arabia has tried to tackle its economy for producing more oil. It has carried out the development of the fields with a rough cost in 2004 US \$ 4 billion.

Saudi Arabia is planning to expand its capacity in the refining, and construct two new refineries. Saudi Arabia projects that aim to reduce dependence on crude oil as the only source of national income:

1. Contracting with international partners to establish petrochemical complexes for the manufacture of fertilizers and other hydrocarbon industries.
2. Creating and development of iron, steel and aluminum industry.
3. Create other supporting and complementary Industries until horizontal integration is achieved in the industrial sector.
4. Marketing of petrochemical products domestically and globally.

Saudi Arabia continues to depend so far on the development of its economy only through oil revenues, without doing developmental alternatives to diversify its economy (Youssef, 2007)

By monitoring the track of the Saudi economy, it is noted that there is an increase in the rate of economic growth through the export of raw materials, where the Saudi GDP has increased, but simultaneously:

1. Unemployment rates increased.
2. Food gap increased.
3. Prevailing of consumption pattern.
4. Increasing trade deficit of capital goods and full manufactured goods.
5. Weak competitiveness.

This means the aggravation of Dutch disease because the endeavors for reform (the treatment of the disease) failed in Saudi Arabia. Privatizations are still moving at a moderate pace because Saudi Arabia apprehends that it may cover the allocation of public services and utilities' operations that offer their services free of charge to citizens; and it will be difficult for the citizen to accept the application of the austerity policy after living in a welfare state (OAPEC report, 1999).

But there are efforts done by Saudi Arabia in the field of tackling the Dutch disease, including: (Salloum, 1991).

1. Manpower development.
2. Achieving economic efficiency in the public and private sectors, because it is a prerequisite for the success of economic diversification policies, and the rationalization of government expenditure.

- Reinforcing the role of the private sector and investment, and implementation of the privatization programs. Saudi economy is also affected by energy subsidies policy to address the social programs represented in fuel subsidies, electricity, water, health and education, and such policy has become a drain on state resources (Fattouh & Alkotaira, 2012).

Table no. (5), given below, refers to the energy subsidies in some Gulf countries, we find that the Kingdom of Saudi Arabia offered subsidies in the field of fuel and electricity amounted 43.52 billion US dollars annually away from water, health, education and other subsidies. The electricity and oil subsidies amounted 9.80% of GDP, and this represents great subsidies, where in Qatar amounted 3.20% of national income and in Kuwait 5.80% of national income (Saudi National Report, 1999)

Table (5) Energy subsidies in some Gulf countries, 2010

| Country | Subsidies average % | Subsidies \$ | Total subsidies from GDP | Subsidies according to fuel type | | | Total subsidies (\$ billion) |
|---------|---------------------|--------------|--------------------------|----------------------------------|------|--------|------------------------------|
| | | | | نقط | غاز | كهرباء | |
| Saudi | 75.80 | 1586.60 | 9.80 | 30.57 | 0.00 | 12.95 | 43.52 |
| Qatar | 75.30 | 2446.00 | 3.20 | 1.15 | 1.41 | 1.59 | 4.15 |
| Kuwait | 85.50 | 2798.60 | 5.80 | 2.81 | 0.90 | 3.91 | 7.62 |

Source: International Environment Agency 2010, p 34

Table (6) Values for the most important commodities for exports, Value: (Million riyals)

| Commodity | 2010 | 2011 | 2012 | 2013 | 2014 |
|-------------------------------------|--------|---------|---------|---------|---------|
| Food products | 11074 | 12605 | 12852 | 12628 | 13405 |
| Agricultural products | 1155 | 1256 | 1078 | 895 | 909 |
| Live animal, Animal products | 4667 | 5216 | 5318 | 4983 | 5562 |
| Mineral products | 808220 | 1192116 | 1266354 | 1208154 | 1068088 |
| Chemical products and plastics | 82338 | 114898 | 124460 | 131800 | 143893 |
| Chemical products | 40089 | 60859 | 66537 | 68225 | 73269 |
| Paper and its manufactured articles | 3668 | 4200 | 3622 | 3038 | 3149 |
| Pearls and precious stones | 1696 | 2273 | 2089 | 1841 | 1864 |
| Base metals and its articles | 7250 | 8395 | 9223 | 11755 | 14128 |
| Electric devices and equipment | 3744 | 3944 | 4236 | 3441 | 3110 |
| Other commodities | 2691 | 3089 | 4042 | 4584 | 4173 |
| Re-exported commodities | 19641 | 24379 | 27729 | 30328 | 30403 |
| Total | 941785 | 1367620 | 1456502 | 1409523 | 1284122 |

Source: Report of the Central Department of Statistics and Information, Saudi Arabia - Exports Statistics --2014

Table no. (7)

| Commodities | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|--------|---------|---------|---------|---------|
| Total of exports | 941785 | 1367620 | 1456502 | 1409523 | 1284122 |
| Mineral products | 808220 | 1192116 | 1266354 | 1208154 | 1068088 |
| Total | | | | | |
| Mineral products rate out of total exports | 133565 | 175504 | 190148 | 201369 | 216034 |
| Mineral product exports percentage of total exports | % 86 | % 87 | % 87 | % 86 | % 83.2 |

Data retrieved from the Report of Central Department of Statistics and Information, Saudi Arabia - Export statistics - 2014

Table no. (8)

| Commodities | 2010 | 2011 | 2012 | 2013 | 2014 |
|--------------------------------|--------|---------|---------|---------|---------|
| Total exports | 941785 | 1367620 | 1456502 | 1409523 | 1284122 |
| Chemical products and plastics | 82338 | 114898 | 124460 | 131800 | 143893 |
| | 859447 | 1252722 | 1332042 | 1277723 | 1140229 |
| Percentage | % 8.7 | % 8.4 | % 8.5 | % 9.4 | % 11.2 |

Source: Report of the Central Department of Statistics and Information, Saudi Arabia - Exports Statistics --2014

The tables mentioned above indicate the following notes:

First: Table (6) shows that the share of mineral products exports to total exports, although they are almost equal over the years cited in the table, represents the highest export value in terms of the contribution of other exports of total exports, where it was 86% in 2010 and 2013 respectively of the total exports, as well as in the years 2011 and 2012 the value was 87%, respectively, and in 2014, it was 83.2% of total exports.

Second, in the table (8), chemical products and plastics are inextricably linked to the oil and ranked the second place after the mineral products in terms of its substantial contribution to the total exports.

Third: The obvious changes in the mineral products found in the size of the change in the year 2011 compared to the year 2010, an increase of (383 896) million riyals, a growth of 47.5%. In the year 2012, the increase 74 238 million riyals (compared to the increase of 2011) by 6.2%, while in the year 2013 there was a decrease from the year 2012, 58,200 million riyals was a decline of 4.8% and in 2014, the value decreased from the year 2013 to 140 066 million riyals, a decline of 12%. This illustrates the extent of change and imbalance between the rise and fall in the value of mineral products and that for the most part due to the price fluctuations that occur on oil.

Fourth: The data shown in the tables No. (6-7-8) proves that the key challenge of the Saudi economy is the total dependence on oil commodity as a sole export with no alternative in the current period, and thus the disease of the Saudi economy is completely similar to Dutch disease in most respects. It is a must to find an integrated prescription and long-term comprehensive economic reform plan to solve the problems of the Saudi economy, particularly at the present time and the immediate initiative in rationalization of consumption and the distribution of oil revenues to update and develop new exports to achieve economic stability and desired sustainable development to preserve resources for future generations.

Results

The study concluded with the following results:

1. Weakness of the Saudi economy for being fully dependent on oil as a key resource and sole commodity for export and the national income and not to use the oil revenue to develop new exports and diversify the economy.
2. The characteristics associated with (Dutch disease) applies mostly to the reality of the Saudi economy, including:
 - a. Import of foreign labor despite the length of the exploitation of oil.
 - b. Rising of food and manufactured goods' prices.
 - c. Weak competitiveness for national products.
 - d. Goods imported from abroad are of lower prices than their prices at home.
 - e. The presence of shadow economy and smuggling.
 - f. Disabling of the productive forces and weakness of the utilization of available resources as appropriate economic.

- g. Control of revenue economy based on mono-economy, i.e. dependence on a sole resource.
 - h. Higher inflation rates with recession, or so-called stagflation.
 - i. Increase the money supply resulting from the sale of raw materials in the foreign market.
3. Norwegian experience is no longer in some respects suitable prescription for the treatment and tackling of the Saudi economy right now because:
 - a. Norway developed processes of tackling before the start of oil production and the flow of its revenue, and proceeded to create an economy to accept the oil phase. This was not done in Saudi Arabia.
 - b. Norway witnessed positive conditions at the beginning of the seventies; the most important is a significant rise in oil prices. Saudi Arabia suffers now from a sharp drop in oil prices.
 - c. Norway took a decision not to depend on oil to finance its budget, and to keep oil revenues in a fund for only supply of 4% per year, to support the budget, and the rest invested for future generations and that did not happen in Saudi Arabia's oil experience as the Saudi oil is a sole resource for financing the Saudi budget.
 4. Some Norwegian solutions can be taken into account when treating the disease of Saudi economy, including:
 - a. Balance between national and international targets in the oil policy.
 - b. Developing of a fund for oil revenues that separates oil revenues from domestic consumption, and contributes to the financing of development and sustainable development plans.
 - c. Avoiding an increase in domestic consumption that might harm the existing industries and the national economy.
 - d. Protecting the budget from economic shocks resulting from the sharp fluctuations in oil prices.
 5. The emergence of other diseases in the Saudi economy other than Dutch disease, such as:
 - a. Environmental degradation and pollution in the oil exploitation and extraction areas.
 - b. Social support programs in the field of fuel increased fuel consumption, and increased the demand for cars.
 - c. Social support policy in the field of (health, education, electricity and water) increased public expenditure in Saudi Arabia. The subsidies reach eligible and ineligible recipients.

Conclusion

This study concluded that the most important problem facing the Saudi economy is its dependence on one exporting commodity that is oil, so that the factors and characteristics of the Dutch disease fully apply to Saudi economy. The Norwegian experience is no longer in some respects a proper prescription for the treatment and tackling of the Saudi economy at the moment. The study recommended that Saudi Arabia must diversify its economy, and reconsider energy subsidies policy and create funds to consolidate the economic stabilization process.

Recommendations

1. Diversifying the Saudi economy, especially in the field of food grains, vegetables, fruits, oilseeds, and animal products as well as the establishment of transformational industries linked to agricultural production.

2. The involvement of people with economic, political and strategic thinking in the leadership of the economy and direction for the development of long-term plans, programs and strategies and establish laws that lead to optimal distribution of wealth.
3. Involvement of community and local institutions and universities in the plans and programs for the production and distribution of natural resources (through scientific research).
4. Creating of funds to consolidate the process of economic stabilization.
5. Reconsidering the energy subsidies policy to cope with the drop/decline in oil prices and subsidies reach only its true eligible recipients.
6. Working to decrease national currency exchange rates so as not to lead to the inability of the national goods to compete with the domestic and export markets.
7. Commitment to faith and Sharia promotes ethics in accordance with the legal norms at work, production, and consumption and distribution wealth, thus achieving sustainable development and the eradication of Dutch disease completely.
8. Fiscal consolidation in a manner subsiding of growth, and this can be achieved by reducing expenditures to ensure the productivity of capital expenditure.

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