

Non-Oil Export Impact on KSA Economic Growth: a Case Study of SABIC Company in Saudi Arabia

Hajar Ahmed Al maghrabi

School of Business , King Faisal University, Kingdom of Saudi Arabia

*Email of the corresponding author: Hajar505050@gmail.com

Abstract

Saudi Arabia is seeking to diversify their sources of income due to the oil prices turn down. Saudi government was lunched vision 2030 which focus to diversify source of income that is not depend on crude oil income. The purpose of this study is to measure the impact of exports from the non-oil sector to the growth of Saudi economy. They are three approach used in this study which they are a case study approach, survey and the portfolio model. A questionnaire was used to obtain information from major exporting firms, SABIC sub-industries and individuals. Data collected and analyzed through quantitative methods by using SPSS software . Results of this study showed that there is a positive impact on non-oil exports to the economy of Saudi Arabia. Finally, researches provides a number of useful recommendations that contribute of the growth of economic in Saudi Arabia.

Key words: crude oil income, non-oil sector, impact, growth.

1.0 Introduction

This case gives an insight to the significance of the non-oil export towards the economic growth of Saudi Arabia and briefly discusses the impact of the non-oil sector on the GDP and government revenue. This forms the basis of the study for the need of economic diversification to counter the effect of oil price volatility so as to reduce the dependency of oil revenue by the government of Saudi Arabia. Examining the past trends in the government expenditure and corresponding revenue generates from export, clearly the Kingdom is likely to face a deficit in the future unless other sources of revenue especially from the non-oil sector are deployed. Saudi Arabia enjoys the affluence of oil production and exportation, and that is world-wide unopposed. However, nations, not in OPEC and the Middle East presently yield more oil, this is projected to change vividly during the following decade. The Persian Gulf is assessed to rise from its world oil exports supply of 30% in 2001 to 37.8% by 2025 (De Santis, 2003). The rest of the world, especially growing Asia will be more dependent on the region. The rising population of Saudi Arabia will overcome the ability of the government to provide for it. Additionally, the uncertainty of oil prices in the international markets have triggered need to formulate other sources of government revenue through production of non-oil products for export mainly by the SABIC. The main objectives of this study are;

I. To devise projects that are aimed at diversifying the sources of income for KSA that are non-oil related, in producing petrochemical products for export to other countries, that can better cushion the economic impact of volatility in oil prices.

II. To formulate ways that can be used to assist the government of Saudi Arabia to be able to provide for the nations increasing population through promotion of foreign investments, private sector and other non-oil schemes that aim at increasing the GDP. The main hypothesis of this study is that the non-oil export has a positive impact on the economy of Saudi Arabia. This general hypothesis is divided into other specific hypotheses that will be examined as follows;

- There is a relationship between exports and economic growth of the country.
- Oil dependency can lead to an economic crisis in Saudi Arabia.
- The expansion of the private sector in Saudi Arabia creates more jobs.
- SABIC's, manufacturing exertions have a positive impact on Saudi Arabia's economic growth, job creation and socio-economic development.
- A conservative budget strategy has assisted Saudi Arabia in containing expenditure volatility and also provides a significant defence for dealing with fiscal risks.
- Expanding the export sector in Saudi Arabia enhances technology transfer into the Kingdom.

These subdivided hypotheses form a guideline to this investigation in determining the consequential impact of non-oil exports to the GDP, the unemployment rate and total revenue of the Saudi Arabia economy.

2.0 Literature Review

In the fields of economic development and international trade, the relationship between export expansion and economic growth has been a topic of a substantial amount of empirical studies. Economists argue that exports play a significant role in any economy, influencing economic growth, balance of payments and employment.

Export expansion combined with diversification has shown to be relevant for economic growth (Mejia, 2011). Mejia observes that, growth in exports can increase the aggregate demand and cause higher economic growth, create employment and determine the GDP of a country. A high export growth rate can promote the economic growth in many ways: First, a rise in exports will enable a nation to have the necessary resources to acquire capital goods that are specifically important in contributing to economic growth. Second, an increase in exports will facilitate a country to attain economies of scale. Third, export expansion is expected to boost more investments in the private sector (Ahmed Al Rajhi, 2012). A considerable growth in exports will lure foreign investments especially to the industries involved with the operation of the main export industry (Al-Moneef, 2006). Additionally, expanding the export sector enhances technology transfer into the nation since exporting domestic firms find that they need to import foreign methods and techniques of production so that they can keep up with international competition. Al-Moneef argues that the level of exports primarily depends on the relative competitiveness of these exports. Diversification of a country's economy can, therefore, increase the level of exports (Mejia, 2011). For instance, promotion of the private sector, productivity to enhance competition. This research focuses on diversification of the economy of Saudi Arabia. The study finds that growth of non-oil exports has a positive impact on production and investment in the Kingdom. This chapter reviews the growth record of Saudi Arabia, contrasts improvements in the non-oil sector to the Kingdom's economy as a whole, and assesses the degree to which increases in output can be pointed to different aspects of production. The rest of the chapter continues with an analysis of movements in GDP and trends in the total and non-oil GDP during 1990 to 2009. It concludes with an analysis of growth in new industries, particularly SABIC and significance of economic diversification for constant increases in revenue.

3.0 Methodology

The purpose of this research is to examine the impact of non-oil exports to the economic growth of Saudi Arabia. This case focuses on the research hypothesis, instruments, design, data, data collection, sample selection and data analysis. Empirical research will be built primarily on the semi-structured interviews. As a result of the substantial amount of data needed for analysing the exports impact to the KSA economy and the private nature of most of this data, the most suitable method was that of case studies which was accomplished through the use of questionnaires. A Case study is "an investigation of an enclosed system of a case over time through comprehensive and extensive data collection including several sources of facts and figures rich in context (Gerring, 2007)". Gerring clarifies that case studies are examined because we are captivated with them for their commonality and uniqueness. The research methodology will also include the use of the Modern Portfolio Theory to model export diversification. The portfolio approach will be used in order to provide guidance to the Saudi government and economic planners, who desire to increase the non-oil export income and lessen the economic instability. The main aim of the export portfolio methodology is to counter fluctuations in the total revenue of the Kingdom. It examines the functional methods to export diversification approaches so as to attain more stability in export income. This approach will be analysed later in the chapter to test the main hypothesis of this investigation.

3.1 Sample Selection and Description.

Target population is defined as all the members of a hypothetical set of people, events or objects to which a researcher wishes to generalize the results of the research study (Maxwell, 2012). The population of study targeted various households, random individuals, non-oil manufacturing firms and seven SABIC branches. The SABIC branches investigated included the headquarters in Riyadh, Yanbu office, Al-Jubail office, SAFCO Saudi Fertilizer Company, Saudi Kayan Petrochemical Company, National Industrial Gases Company and Saudi European Petrochemical Company. Most of the companies were based in Jubail. Previous studies carried out in the Kingdom of Saudi Arabia conveyed major strains in obtaining facts and figures from the manufacturing firms in Saudi. The complication is that many firms are uncomfortable with the idea of surveys conducted externally. They fear that provision of information relating to their activities will be advantageous to their competitors. As a result, attempt to study such enterprises have always stumbled upon difficulties: no survey in the past has thus been accomplished without difficulties in Saudi Arabia. Consequently, this research focussed on the SABIC Company, who has had export experience and 20 exporting firms with similar experience of at least three years so as to have an equitable basis for analysis. The number of employees in a firm was also considered. Respondents comprised of all kinds of non-oil firms, which was well thought-out as allowing the respondents more expertise in their diverse fields. Thus, they would have an enhanced understanding of the utilization of questionnaires in research. The entire process of data collection was implemented for a period of six weeks. Nevertheless, some firms did not receive the questionnaires on time as they were sent on email, postal service and physical delivery. On the other hand, most households and other individuals were cooperative in providing

information about their details and opinions. However, few people assumed that the questionnaire was unwanted for time wasting because they acknowledge the significance of such investigation to their export development. By the end of the six weeks, the response rate was at 84 percent, which was an acceptable rate.

3.2 Research Instruments

The main method used for this investigation was a survey research. (Maxwell, 2012) Notes that studies that include surveys consist a substantial amount of the research done in the academic meadow. Educational surveys are mostly used to aid in planning, evaluating the efficiency of a realized program and in decision making. The survey was directed to the chosen sample from the Saudi Population. The literature on the impact of non-oil exports to the economy of Saudi Arabia brings to light the variety of methods used for information gathering to complete the research. In as much as other secondary were used, the primary method used was administration of questionnaires. A questionnaire was directed to the companies' employees and managers for information gathering. The personnel involved included those from government departments such as the Ministry of Finance and Ministry of Petroleum and minerals. Also, common people were interviewed so as to obtain their opinions on export growth for the Kingdom. In this respect, the questionnaires served as a way of conducting in-depth interviews for the purpose of data collection.

Questionnaires are an efficient technique for collecting data and information based on sample features, opinions and experiences. The outcomes from the questionnaires can subsequently be used to represent the total population based on a sample (Gerring, 2007). A questionnaire was used for data collection because of practical efficiency. In this respect, Gerring stated that potential respondents can be reached at a fairly low cost through the usage of a questionnaire. In the course of the preparation stage, it was clear that the information required for this research could be best achieved through a mail questionnaire completed by the executive managers. As Gerring suggests, a questionnaire is beneficial to any researcher who pursues information relating to the internal operations of the company. Also, a questionnaire helps in enhancing the generalisation of information, giving the respondents liberty to express their views. The questionnaire was aimed at ensuring that respondents focussed on the specified instructions. It was divided into sub sections that provide the respondents with the nature of the data needed. This was ensured so as to offer enthusiasm for the respondents in filling the questionnaire. The questionnaire did not demand any personal details such as names that might have jeopardised privacy and bias in response. Figure 3.1 and Figure 3.2. Shows a summary of the questions asked in the questionnaires that was used to collect data from the firms and Saudi citizens respectively.

3.3 Data sources.

Annual data on real GDP and nominal GDP and the net exports from 1970-2013 are retrieved from the Saudi Arabian Ministry of Economy and planning, the Central Department of Statistics and Information (2011-2012) and the Gulf Petrochemicals and Chemicals Association, (GPCA) .The data from 1923-1969 is quite unreliable hence this chapter utilizes data from 1970. Population data is obtained from the International Financial Statistics (2013) and the Central Department of Statistics. Oil revenue, non-oil revenue and total revenue are drawn from the international monetary fund and Saudi Arabian Monetary Agency (SAMA). Data on Saudi Arabia's oil production, oil exports and OPEC exports are retrieved from the British Petroleum Company reports. The world oil prices and inflation rates are obtained from the Organization of Petroleum Exporting Countries (OPEC) publications. Data on the unemployment rates in Saudi Arabia is obtained from the International Monetary Fund. The source of information relating to the target population is the Saudi Export Directory (2013).

Analysis of Export Diversification: Portfolio model for export expansion.

The Morden portfolio theory, MPT, gives a basis to financial investment. The MPT implies that a rational investor will find the efficient portfolio which provides the best combination of risk and returns (Bruns, 2013). A portfolio is referred to as efficient if it maximizes the expected return for a given risk or it minimises the risk for a particular expected return. Bruns explains this approach by a creating a model for selecting portfolios, using the principle of diversification. Bruns assumes that: 1) investors who wish for high returns are adverse to high risks, 2) investors make investment decisions based on risky assets that are approximated by mean, variance or covariance and 3) the expected utility of investors depends on their investment decisions. The Bruns mean-variance portfolio model produces the efficient frontier of all risky assets. This shows that investors will only choose a portfolio that lies on the efficient frontier.

In this case, an investor or economic planner can choose only from this efficient set, from the efficient frontier, based on the variability of risk (K) and returns (Income), denoted by I.

Therefore, the risk (K) of an export portfolio can be written as:

$$K = \sum e_i^2 \text{VAR} (P_i, Y_i) + \sum \sum e_i e_j \text{COV} (P_i Y_i, P_j Y_j)$$

Where

e_i is a non-negative export share of the product i

P_i, Y_i is the export income from product i

P_i is the price

Y_i is quantity of export

$VAR(P_i, Y_i)$ is the variance of export income for the product i

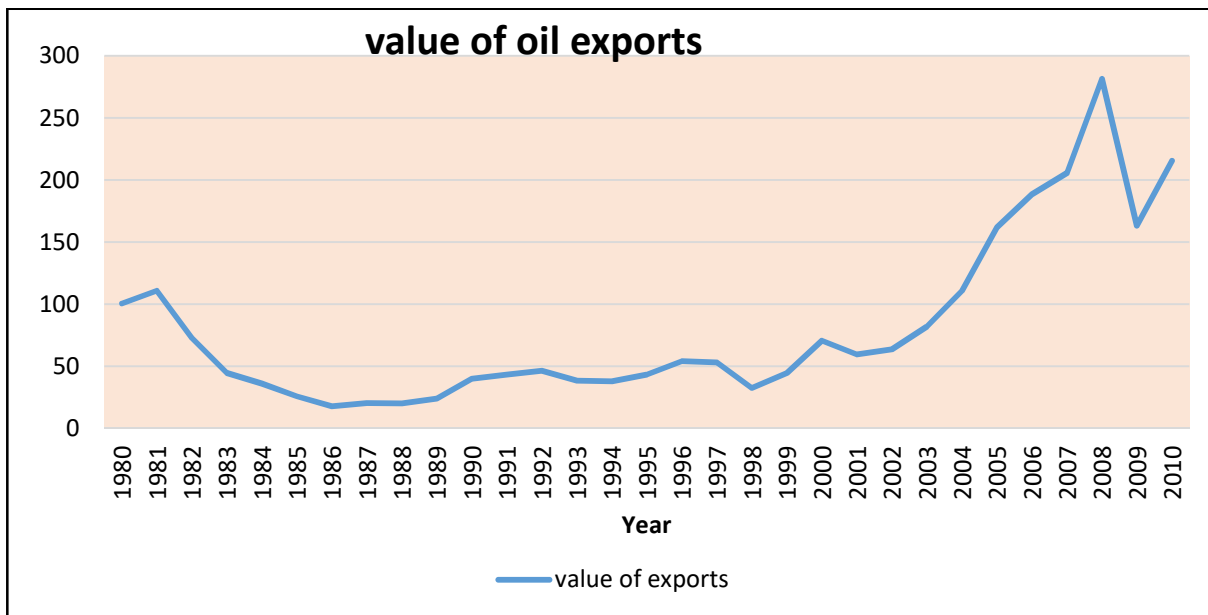
$COV(P_i Y_i, P_j Y_j)$ is the covariance in export income from products i and j .

The covariance is significant for reducing the risk of variability of income. So, if the exports from the products i and j are negatively correlated, the covariance reduces the total variance or risk of the export portfolio. Let's say there is no covariance, the contribution of the stable product can be increased whereas those of the unstable products reduced so as to decrease the total instability. Therefore, in order to minimize overall instability, in the absence of covariance, one should specialise in the most stable product. For Saudi Arabia, most of the non-oil products follow the same property of other primary products. Several products have indicated short-term instability and a downtrend in prices. Nevertheless, The Saudi economic planners and government should recognize the non-oil sector as a course for economic diversification. The Portfolio theory has been commonly applied to the investigation and analysis of exports. The principle of diversification in portfolio theory states that the portfolio risk is usually determined by the relations between individual investments, and not by the particular riskiness of every investment. An optimum export portfolio can be established by choosing products that minimise the risk or instability of export revenue while attaining a certain level of export growth rate. The economic planners who seek to diversify the composition of products for export can apply this approach to assist in maximizing and stabilizing export earnings. Several studies have utilized the export diversification to solve the problem of instability for key products and fluctuations of prices (). Most studies are consistent with the fact that export income instability has a constant negative impact on the economic growth. However, this approach ignores the possibility of investigating the impact of negligible changes in the quantity of exports. Therefore, this model shows that continuous dependence of crude oil could lead to economic instability. Since non-oil exports can be regarded as a stable product, removal of the covariance factor increases the contribution of the stable product, thus, reducing instability. This model shows that non-oil exports have a positive impact on the economic stability and growth of Saudi Arabia. This case concentrates on the research methodology, hypothesis, target population and the sample characteristics, research design and data analysis used in this study. It outlines the various methods used for data collection and sources of literature. The case states the main hypothesis of the study and analyses how the export portfolio approach is used to test and prove the hypothesis that non-oil sector exports have a positive impact on the KSA economy.

4.0 Result

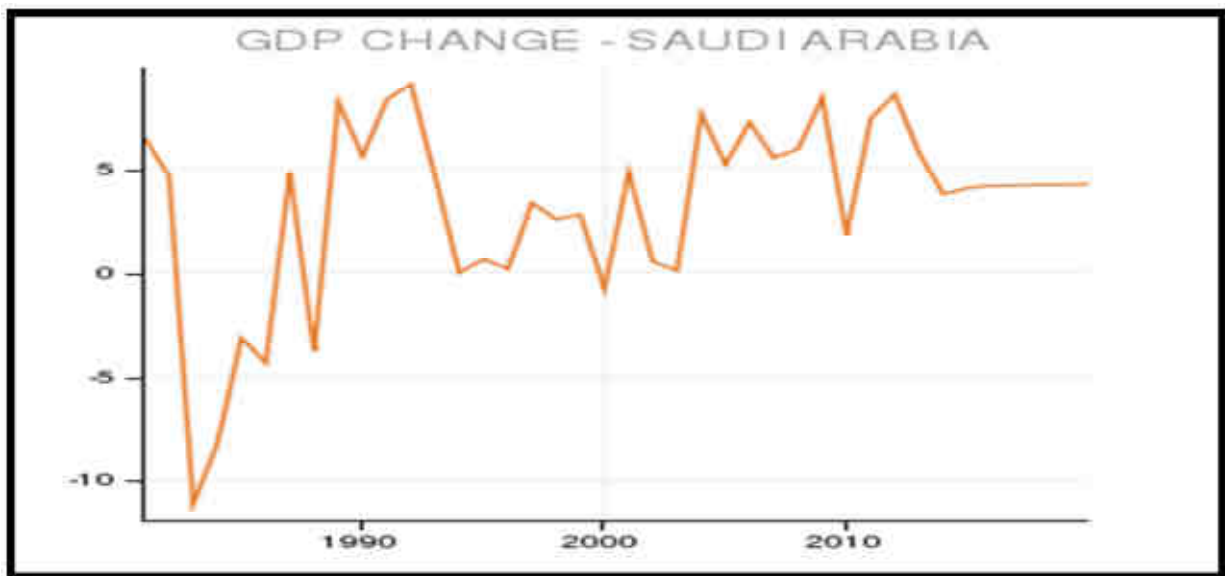
The purpose of this investigation was to examine the impact of non-oil exports on the economy of Saudi Arabia. The GDP contribution due to exports by both the oil and non-oil sectors were compared according to the economic trend of the Kingdom. Moreover, the change in unemployment rates and total revenue were significantly examined following economic diversification over the past years. These analysis were done in order to determine whether export expansion has a positive impact on the KSA economy, the basis of the hypothesis for the study. Saudi Arabia is ranked as the world largest oil reserve, but, the understanding that oil is exhaustible has prompted the Saudi government to explore other sources of income (Ahmed Al Rajhi, 2012). The purpose of this section is to determine if continuous dependency on oil may lead to future economic crisis. It is divided into two sub-sections: The Kingdom's GDP growth rate is also influenced by the volatility of the oil prices. Figure 4.2 indicates how the growth rate of GDP has changed over the years in the oil-dependent country Figure 4.3 illustrates the relationship between a change in oil prices and the value of oil exports from 2002 to 2011. The graph shows that a drop oil prices causes a resultant decrease in the value of the net exports. The three graphs clearly depict that Saudi Arabia's net exports are dependent on the crude oil prices and thus, this oil dependency could cause economic instability in the future. Therefore, there is the need for diversification of exports so that Saudi can be prepared for any economic crisis due to fluctuations of Oil prices.

Figure 4.1: Value of Oil exports in Saudi Arabia (in US dollar billion).



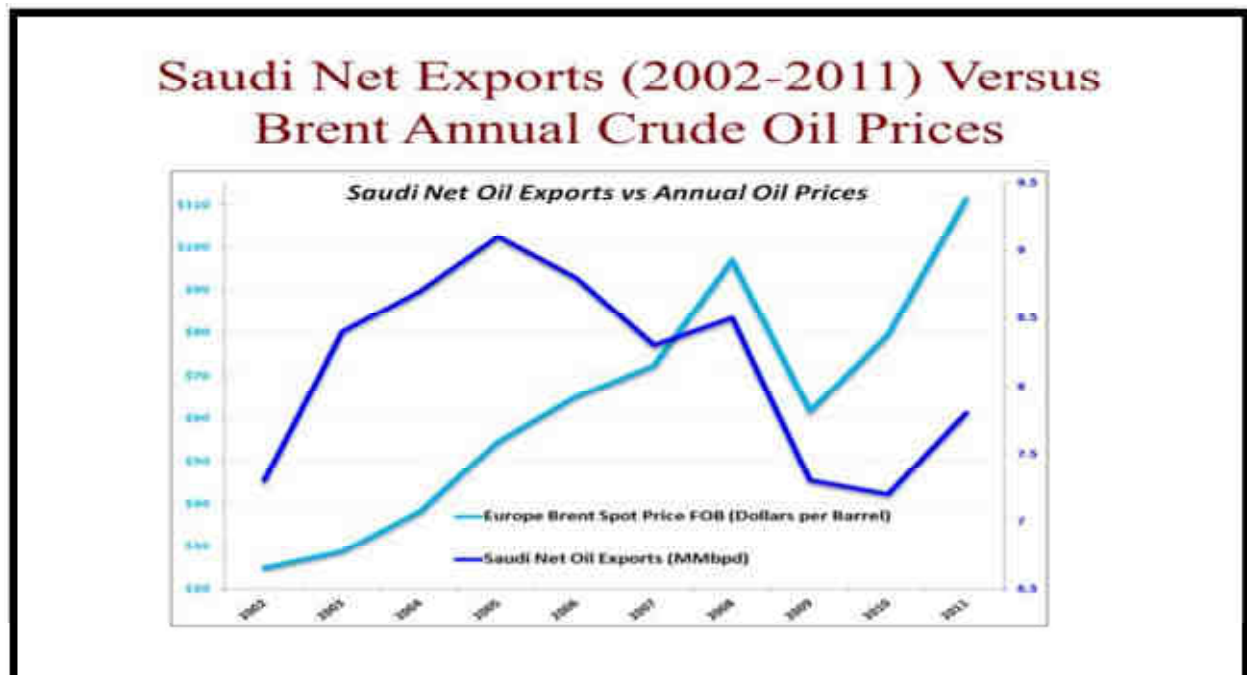
Source: www.tradeeconomics.com

Figure 4.2. GDP Growth rate in Saudi Arabia.



Source: International Monetary Fund.

Figure 4.3: Saudi Net Exports verses Crude Oil price



Source: Saudi Arabian Monetary Agency.

4.1. Unemployment and growth

Table 4.1 shows the unemployment rates in Saudi Arabia and how it has been changing over the years. The unemployment problem is due to systematic and fundamental shortcomings, for example, a still private sector that is dependent on foreign workers. The total population in Saudi Arabia is around 29.9 million individuals with more than two-thirds of the population younger than 30 and around 100000 graduates entering the job market annually. The Saudi government should thus consider lessening the dependence of foreign workers in the private sector by promoting the development of new firms and encouraging new private entrepreneurs. This will create new jobs for the Saudi citizens.

Table 4.1 Unemployment rate in Saudi Arabia

Year	Unemployment rate (%)	Percentage change
1999	8.1	
2000	8.15	0.62%
2001	8.34	2.33%
2002	9.66	15.83%
2003	10.35	7.14%
2004	11	6.28%
2005	11.52	4.73%
2006	12	4.17%
2007	11	-8.33%
2008	9.8	-10.91%
2009	10.464	6.78%
2010	10	-4.43%

Source: International Monetary Fund. World Economic Outlook

This case based on the objectives of the research. The aim of this study was to examine the impact of non-oil exports to the economic growth of the Kingdom of Saudi Arabia. It also offers a number of recommendations useful to the field of Economics.

5.0 Summary

The oil sector forms the major basis of the Saudi Arabian economy. The Kingdom's economy has been heavily relying on crude oil exports, such that a slight drop in oil exports has a huge impact on the overall economy of the country. Accordingly, the Saudi government and economic planners have discovered that it would benefit the Kingdom's economy if they utilise income from oil by investing in the private sector. Sectors like the manufacturing, agriculture and the petrochemical industry all aim at diversifying the Kingdom's economic base. The objective of this study is to investigate the contribution of the non-oil sector to the economic growth of KSA up to date and to examine the Saudi Arabian policies that aim to diversify the economy. The main methods used for this study was a case study approach, survey research and the portfolio model. A survey questionnaire was used to obtain information from major exporting firms, SABIC sub-industries and individuals regarding their contribution and opinion to the Kingdom's economy and how to diversify it. The target population was the Saudi citizens and the exporting private firms. Subjects were selected randomly from the population to form the sample. The research utilized the Modern Portfolio Theory in determining the relationship between export earnings from different commodities and economic stability.

The data collected and findings were discussed and the relationship between exports and economic growth was clear that the two were dependent. Particularly, in respect to this study, there existed a positive impact on non-oil exports to the economy of Saudi Arabia. Moreover, the non-oil sector contribution is mainly through the manufacturing sector, especially the petrochemical industry. The study shows, through comparison of GDP and revenue contribution by both the non-oil and oil sector that Saudi Arabia is likely to face economic turbulence in the future if the economy continues to depend on oil revenue. The research concludes by outlining strategies and development plans for the future, by the major non-oil exporter, the petrochemical industry under SABIC that aims at diversifying the Kingdom's economy.

6.0 Conclusions.

The research is based on sub-divided hypothesis that have all been tested and proved. The hypothesis are listed as follows;

Ho: There is a relationship between exports and economic growth of the country.

It is evident from the research Saudi economy is oil based and that any fluctuations of oil prices would adversely affect oil exports for the country a negative export would result to less revenue and consequently affect the growth of the economy. Therefore, there exist is a relationship between exports and economic growth.

Ho: Oil dependency can lead to an economic crisis in Saudi Arabia.

The export portfolio patently models how dependence on a primary commodity for export earnings can lead to economic instability (Bruns, 2013). Also, the financial crisis in the 1980 and 2008 had an adverse impact on the economy of Saudi Arabia, causing the national exports to reduce. If this reliance on oil is to continue, considering oil is also a depleting source, the KSA economy will have experience a crisis in the near future. Therefore, the hypothesis is manifested that oil dependency can without doubt lead to an economic crisis.

Ho: The expansion of the private sector in Saudi Arabia creates more jobs.

From the findings and data from the questionnaires, most individuals are employed by the private sector and the establishment of the petrochemical industry has led to employment of more than 40,000 people currently. Also, future projects by the SABIC aim at creating new jobs. For that reason, the expansion of the private sector in Saudi Arabia creates more jobs.

Ho: SABIC's, manufacturing exertions have a positive impact on Saudi Arabia's economic growth, job creation and socio-economic development.

The petrochemical industry has played a major role in the national GDP contribution and has registered a positive growth especially from 2006 to 2012 as discussed in chapter 4. The foundation of SABIC led to job creation and boosted the total exports of the Kingdom (Ahmed Al Rajhi, 2012). Consequently, the hypothesis stated is true.

Ho: A conservative budget strategy has assisted Saudi Arabia in containing expenditure volatility and also provides a significant defence for dealing with fiscal risks.

The formulation of government incentives aimed at utilizing the revenue from oil to supporting the foreign investment and the private sector has enhanced development in the non-oil sector (Cordesman, 2003). This conservative budget strategy will and has cushioned the economy against oil price volatility. Thus, the hypothesis identified is true.

Ho: Expanding the export sector in Saudi Arabia enhances technology transfer into the Kingdom.

Expansion of the export sector entails the government encouraging foreign investments in the Kingdom. Through international interactions, technological know-how is established within the industries making them produce high quality and durable products. Therefore, expanding the export sector in KSA enhances technology transfer into the Kingdom.

Since all the hypothesis are true, we can, therefore, conclude that non-oil exports have a positive impact KSA economic growth.

Recommendation

This research has some shortcomings due to the unavailability of data and information on the research topic from 1923 to 1969. Data from 1923 to 1969 would be advantageous so as to achieve better results. Also, even though this study focuses on the impact of exports from the non-oil sector to the Saudi economy, it is not worthwhile to overlook the fact that there exists other variables which touch on the economic growth. Correspondingly, in this investigation, GDP was mainly used as a measure for growth of the economy. Nonetheless, we are cognisant that other variables may also be used as a proxy for growth of the economy. Such variables include GDP per capita, gross national product, HDI indicators, which is health, education and living standards, advancement in technology, household income among others. Hence, these variables should be examined for further research.

Reference:

- Ahmed Al Rajhi, A. A. (2012). *Economic Development in Saudi Arabia*. Routledge.
- Al-Moneef, D. M. (2006). *A contribution of the Oil sector to Arab Economic Development*. Vienna: Druckerei Edelbacher.
- Alperowicz, N. ". (2011). Sabic Participates in Study to Develop Six Industrial Cities. " *Chemical Week* 173.7, 14-14.
- Amuzegar, j. (1983). *Oil Exporters' Economic Development in an Interdependent World*. International Monetary Fund.
- Bruns, F. (2013). *Windfall Profit in Portfolio Diversification? An Empirical Analysis of the Potential Benefits of Renewable Energy Investments*. Diplomica Verlag.
- Cordesman, A. H. (2003). *Saudi Arabia Enters the Twenty-First Century*. Greenwood Publishing Group.
- De Santis, R. A. (2003). Crude oil price fluctuations and Saudi Arabia's behaviour. *Energy Economics*,25(2), 155-173.
- Gerring, J. (2007). "Case study research." *Principles and Practices*. Cambridge.
- Group, T. &. (2003). *The Middle East and North Africa: Regional Surveys of the world*. Psychology Press.
- Gylfason, T. (2001). Natural resources, education, and economic development *European Economic Review*, 45(4),. 847-859.
- Hertog, S. (2011). *Princes, brokers, and bureaucrats: oil and the state in Saudi Arabia..*. Cornell University Press.
- Mababaya, M. P. (2002). *The Role of Multinational Companies in the Middle East: The Case of Saudi Arabia*. Universal-Publisher.
- Maxwell, J. (2012). A. *Qualitative Research Design: An Interactive Approach: An Interactive Approach*. Sage..
- Mejia, J. F. (2011). *Export DIversification and Economic GRowth:An Analysis of Columbi's EXport Competitiveness in the European Union's Market*. Springer Science & Business Media.
- Narayan, P. K. (2009). Multivariate Granger causality between electricity consumption, exports and GDP. evidence from a panel of Middle Eastern countries. *Energy Policy*, 37(1,). 229-236.
- Ozturk, I. (2010). A literature survey on energy–growth nexus. *Energy policy*. 38(1, 340-349.
- Ramady, M. A. (2010). *The Saudi Arabian Economy: Policies, Achievements, and Challenges*. Springer Science & Business Media, 2010.
- Shoult, A. (2006). *Doing Business with Saudi Arabia*. GMB Publishing Ltd.
- Vreeland, J. R. (2003). *The IMF and Economic Development*. Cambridge University Press.
- www.tradearabia.com. (n.d.)

Author : Hajar Al maghrabi candidate to complete PhD in supply chain management . she completed Master's degree in Business Administration (MBA) from King Fiasal University (KFU), Saudi Arabia. She completed A.B.A. in English language from King Fiasal University . Hajar worked as Administrative Secretary in prince sultan cardiac center in Al hasa. Her professional interest is researching include : Economic ,Operation Management, Supply-Chain Management, and E-marketing.