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Financial Performance of Petrochemicals Industry in Saudi Arabia: Pre and Post Global Economic Recession

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ABSTRACT

Industrial development is plays rapid and robust role in the economic development of a nation and contributes to the GDP. The industrial development is the base of development in any economy. In present global era, most of the business players are running their business activities internationally and enjoying the benefits of large scale turnover. So, the business is not limited to a particular specified territory of a nation and governed by the global environment that affects an economy. The global economic recession (GER) affected the business of most economies in the period of 2007 to 2009. Saudi economy is predominantly based on petrochemical exports in the world and petrochemical industry is the volumetric contributor of the Saudi Arabian GDP. This Paper tries to find out the effects of GER on petrochemical industry and variations in financial performance of selected petrochemical companies of Saudi Arabia. The study is purely based upon secondary data available on the websites of Saudi Arabia and considers only financial aspects to measure the impact of GER on the performance of petrochemical industry.

Keywords: Global Economic Recession, Petrochemicals, Financial Performance, Pre and Post GER, Saudi Arabia.

INTRODUCTION:

Industrial development is the key factor for the enhancement of an economy. Financial performance leads expansion and spin off for the corporation and industry. Financial performance of a corporation or a particular industry is driven by some internal and external forces. Internal forces are adhesive and controllable in nature. External forces are generated by international or global economic atmosphere and uncontrollable. Political-Legal, Economic, technological, socio-cultural, technological and Global business environment etc., govern a business externally. Economic environment and Global business environment directly and coherently affect business and industry. Negative trend of external environment of business creates slowdown and leads recession in an economy. Saudi Arabia economy is based upon the petrochemical industry. GER converted the economic pattern globally and attract economists to overcome from the negatives of the recession. Emerging industries diminished while major components of GDP cut down their contribution to the economy. In Saudi Arabia, petrochemicals are the fundamental industry and afflicted by the Global Economic Recession. Global Economic Recession inevitably curtailed the growth of all sectors globally. From 2008 to 2009, there was Global Economic Recession (GER) in the world and affected the business world gradually. GER changed and affected the pattern of financial performance of petrochemicals industry of Saudi Arabia. So, there is need to study the financial performance of petrochemical industry Arabia as it is the main export industry of the country. Comparison of pre and post financial performance analysis and their interpretation will facilitate the impact of GER on petrochemical industry of Saudi Arabia and it will reveal the change in the financial performance.

OBJECTIVES:

The research objectives of the study are as follows:

- 1. Analyze pre and post global economic recession (GE) and recent financial performance of the petrochemical industry of Saudi Arabia to get variations.
- 2. Study variations of financial performances and get probable responsible reasons.
- 3. Facilitate suggestions to enhance financial growth of Petrochemicals industry of Saudi Arabia to assure augmented contribution in Economy.

LITERATURE REVIEW:

There are a number of empirical studies focuses on the impact of global financial crisis (GFC) on the financial performance of companies in different sectors. However, there are scarce studies focusing on the Saudi Arabian listed companies in petrochemical sectors. This study will analyze the financial performance of petrochemical firms in Saudi Arabia before and after GER. Companies' financial performance is highly impacted by the business environmental factors. These factors may bring negative or positive implications. Global Economic Recession (GER) had a profound effect on financial performance businesses worldwide in the period 2008 to 2009. Ying Lai, Rashid Abdul Aziz and Khuan Chan (2014) find a decline in profitability during GER for the Malaysian construction companies with limited impacts in time and scope. Ying Lai, ect (2014) state that financial ratios such as solvency, liquidity, profitability and cash flow ratios were retrieved to pre-GFC levels in 2010. However, Dietrich and Wanzenried (2011) suggest that the impacts on banks' performance during GFC period were based on the measure being used. Accounting measures used such as ROA resulted in an improvement in banks' performance whereas the use of performance stock-based measure such as Tobin's Q performance led to a reduction. Similar results were founded for hospitals that were financially weak in pre-GER and post-GER causing continuous financial deficiencies (Bazzoli, Fareed & Waters, 2014). It seems generally the financial performance of a company remains similar in pre-GER and post-GER period .Osmani and Deari (2016) analysed the financial performance of listed companies on Macedonian stock exchange market, and found out that the overall results indicate insignificant differences were noticed on selected financial ratios in positive country's growth rate. A decline in profitability was experienced during GFC period, whereas liquidity ratio improved significantly in post-GER, implying the impacts of GEC reflection in the respective ratios (Osmani & Deari, 2016). Hasan and Dridi (2011) compared the GFC effects on profitability, credit, asset growth and external ratings between Islamic banks and Conventional banks in various countries. They suggest different impacts on the two types of banks, in which Islamic banks had limited effects on profitability in 2008 but the profitability of other Islamic banks with poor risk management reduced significantly in 2009, comparing with conventional banks (Hasan & Dridi, 2011). Islamic banks had less unfavorable implications than conventional banks during GER (Hasan & Dridi, 2011). Another comparative study conducted in the GCC countries to compare the performance of Islamic and Conventional banks during 2005-2010 (Siraj & Pillai, 2012). The results revealed a preferable position of Islamic banks in the areas of profitability and financial position compared to Conventional banks (Siraj & Pillai, 2012). It was found that the most impacted banks in the period of financial crisis were Conventional banks, indicating that Islamic banks were less affected (Siraj & Pillai, 2012). Therefore, high quality risk management practices can help improve profitability level and decrease uncertainty in business environment. GER had significant impacts on the economy of many countries. Saudi Arabia highly depends on oil as a main source of revenue, which is subject to market volatility and turmoil. Saudi petrochemical sector had enjoyed substantial financial growth, resulted from increases in energy prices before the oil price drop from \$141 to \$70 leading to unfavorable effects on oil and petrochemical markets in 2008 (Shaikh, 2008). The performance of petrochemical firms was affected during the period of GER. According to Akhtar and Asif (2017), profitability, which consisted of gross and net margins, was declining during GFC in petrochemical sector. In pre-GFC, gross and net margins were recorded at 42.3 and 26.1 percent respectively, however, these margins dropped after GFC reaching to 27 and 14 percent respectively (Akhtar & Asif, 2017). The petrochemical industry performance is driven by petrochemical demand that is significantly associated with global economic growth (Saudi Hollandi Capital, 2012). In addition, Saudi petrochemical sector was the most affected industry by the differences between oil price and sector stock markets in the period of 2008 and 2009 (Mensi, 2017). The implications of the results are driven by the efficient use of resources, energy prices and global economic growth that can impact both costs and profitability (Akhtar & Asif, 2017). As the GFC resulted in a recession in international demand on most important GCC export products like petrochemicals, the financial performance of petrochemical sector was

affected (Woertz, 2008). Another study conducted by (Putra, Lahindah, Rismadi, 2014) aims to contrast the financial performance on oil and gas sector in the period of pre- and post-GFC 2006-2011. The study measured the financial performance of Indonesian oil and gas industry by profitability ratio, liquidity ratio and market ratio. It was found that there was substantial difference performance existed during the period pre- and post-GFC. The oil and gas industry is subject to high uncertainty caused by unexpected changes in oil prices, which are affected by macro-factors such as global growth and demand.

RESEARCH METHODOLOGY:

The study is purely based upon secondary data obtained from financial statements of concerned corporation available at www.argaam.com websites of Saudi Arabia. Primarily, Ratio analysis provides base and used to get the glimpses of financial performances of corporations. The averages of ratios and averages of absolute amounts are calculated to get precise financial performance of petrochemical industry pre and post GER. The study and analysis is divided into i.e. pre and post GER. To get the precise financial performance average of ratios and absolute amounts (Pre and post GER) is calculated which is used in hypothesis testing to get significant differences pre and post GER. For testing significant difference in financial performance between pre and post GER, student's t test is used assure variations in financial performance. The hypothesis testing is done at 5% percent level of significance and results are drawn based of the p-values approach. Averages of financial ratios of companies' pre and post GER are used as variables of two batches for statistical analysis of this study to get significant differences.

LIMITATIONS OF THE STUDY:

This study is based upon the secondary data obtained from the websites. So, authenticity of consequences of the study will be based upon available information. The financial performance of any corporation or industry might be affected by some internal factors also. So the study is relative in nature and assumes that all the internal and external factors remain same except Global Business Environment and Economic Environment.

HYPOTHESIS:

The Hypothesis of the study is as follows:

Null Hypothesis: There is no significance difference between the average profitability of Petrochemicals companies of Saudi Arabia in pre and post GER.

Null Hypothesis: There is no significance difference between the average return on investment of Petrochemicals companies of Saudi Arabia in pre and post GER.

Null Hypothesis: There is no significance difference between the average return on equity of Petrochemicals companies of Saudi Arabia in pre and post GER.

Null Hypothesis: There is no significance difference between the average short term paying ability of Petrochemicals companies of Saudi Arabia in pre and post GER.

Null Hypothesis: There is no significance difference between the average long term paying ability or financial position of Petrochemicals companies of Saudi Arabia in pre and post GER.

ANALYSIS, RESULTS AND INTERPRETATION:

The analysis and interpretation is based upon only industrial analysis and firm analysis of pre and post GER. So, the industrial analysis will reveal the significant variations in financial performance before and after GER while firm analysis will facilitate depth analysis to know the factors leading to significant variations.

a. industrial analysis: Pre and post global economic recession (GER):

In students't test, the average of four years of financial ratios pre and post of GER are used as variables for two batches. Calculated p values are compared with the significance level of 5% ($\alpha = 0.05$) and the results are as follows. For hypothesis 1, Null hypothesis is accepted (P = 0. 0.3673) refers that there is no significant difference between the average profitability performance of the petrochemicals companies of Saudi Arabia in pre and post GER. For hypothesis 2, Null hypothesis is accepted (P=0. 0.9618) implies that there is no significant difference between the average return on investment in petrochemicals industry in pre and post GER.

For Hypothesis 3, Null hypothesis is accepted (P = 0. 0.5319) indicates that there is no significant difference between the return on equity of the petrochemicals companies of Saudi Arabia in pre and post GER.

For hypothesis 4, Null hypothesis is accepted (P = 0.0.7740) specifies that there is no significant difference between the average short term paying ability of the petrochemicals companies of Saudi Arabia in pre and post GER. For hypothesis 5, Alternative hypothesis is accepted (P = 0.0.3385) signals that there is significant difference between the long term paying ability of the petrochemicals companies of Saudi Arabia in pre and post GER. So, on the basis of above analysis, it can be concluded that there is no significant differences in the financial performances of petrochemical industry of Saudi Arabia.

b. Firm Analysis: Pre and Post Global Economic Recession (GER)

The individual analysis refers financial performance analysis and provides evidences of differences, if any. So, individual performance analysis will include profitability, return on investment and equity, short term paying ability and long term paying ability or financial position of petrochemical companies of Saudi Arabia before and after GER.

i. Profitability:

Profitability refers the profit earning capacity of the organization. Profitability ratios indicate that how efficiently an organization is running their activities and earing profit. Profitability of an organization can be measured operational efficiencies, return on total assets or shareholders' point of view. So, In this study gross profit ratio, return on total assets ratio and return on equity ratio are calculated to get the profitability of petrochemical companies' of Saudi Arabia.

a. Gross Profit Ratio:

Gross profit ratio is obtained by dividing gross profit by sales. Gross profit ratio measures the profit earning capacity of the concern establishing logical relationship between gross profit and sales (Ali & Haque,2017). The higher gross profit ratio is considered favorable for the organization (Ali & Haque,2014).

Years		Petrochemicals Companies										
rears	SABIC	SAFCO.	Nama	SIIG	Sipchem	TANSEE	Average					
2004	39.30	49.39	12.03	36.38	302.43	NA	87.91					
2005	42.28	58.92	13.04	35.51	272.22	34.45	76.07					
2006	40.44	59.54	17.47	40.32	230.77	37.02	70.93					
2007	37.99	73.72	15.16	32.71	215.77	25.54	66.82					
Average	40.00	60.39	14.43	36.23	255.30	32.33	75.43					
2010	31.94	70.99	17.84	19.72	110.52	28.38	46.57					
2011	32.72	74.54	3.79	17.38	459.03	35.58	103.84					
2012	28.74	72.45	11.95	-55.82	-467.23	31.12	-63.13					
2013	29.28	67.89	8.28	16.38	197.81	26.58	57.70					
Average	30.67	71.47	10.46	-0.59	75.03	30.42	36.24					

Table 1: Pre and post GER Gross profit ratio of petrochemical companies

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above table it is clear that before GER the average gross profit ratio of petrochemical companies was 75.43% while after the GER was only 36.24% reveals that there was double profit of companies before the GER.

Petrochemicals Companies									
Average Sabic safco Nama SIIG Sipchem Tansee A									
Average 1(SAR)	89831219.5	2029119	358655.8	1359392	898890210	3871338	198493719.1		
FBI _{Av.1}	100	100	100	100	100	100	100		
Average 2 (SAR)	179981332	4515378	704315.3	3265239	3311108032	17940786	699914858.9		
FBI _{Av.2}	200.35	222.53	196.38	240.20	368.36	463.43	281.87		

Table 2: Sales Volume and its average trend pre and post GER

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above average study, it is clear that there is 282% increment of average sales volume of petrochemical companies after the GER. All the companies sales volume increased by double amount but sales of Sipchem and Tansee increased by on an average four times before GER. Sales of petrochemicals companies is increasing but profit is not increasing in same proportion. It indicates that there is need to control upon cost of sales to enjoy the benefits of production at large scale.

b. Return on Assets:

Return on investment is the ratio of profit before tax and total assets (P. Muralidhar, 2010) and reveals the profitability of operational performance in respect of total resources utilized in the organization (Ali & Haque, 2014). The higher return on investment ratio is to be considered favorable for the concern (Ali & Haque, 2017).

Vacus	Petrochemicals Company									
Years	SABIC	SAFCO.	Nama	SIIG	Sipchem	TANSEE	Average			
2004	11.74	13.17	-3.81	21.21	0.26	NA	8.51			
2005	14.54	18.40	3.48	13.29	7.52	6.08	10.55			
2006	12.81	17.66	2.41	13.68	9.87	5.42	10.31			
2007	11.36	28.29	2.12	9.25	7.92	2.70	10.27			
Average	12.61	19.38	1.05	14.36	6.39	4.73	9.75			
2010	7.60	39.34	1.81	2.17	3.51	4.29	9.79			
2011	9.57	44.81	-9.93	2.48	4.99	6.13	9.68			
2012	8.06	39.60	-0.44	2.58	4.43	3.91	9.69			
2013	8.13	34.60	-1.41	3.22	4.05	2.54	8.52			
Average	8.34	39.59	-2.49	2.61	4.24	4.22	9.42			

Table 3: Pre and post GER return on investment ratio of petrochemical companies

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above table, it is observed that the average of return on investment is equal in pre (9.75) and post GER (9.42) but this is only because of unexpected increment in the ratio of SAFCO Petrochemical Company. There was negative trend observed in petrochemical companies except SAFCO. Return on investment of SAFCO is satisfactory as its gross profit was also revealing increasing trend pre and post GER. Otherwise; rest companies are losing their return on investment as increasing their investment in total assets.

Petrochemicals Companies										
Average	Sabic safco Nama SIIG Sipchem Tansee Av									
Average (SR)	170553756.8	6560949	1234201	3815135	5019415170	12254061	1040315842			
FBI _{Av.2}	100	100	100	100	100	100	100			
Average (SR)	331633268.3	9303878	2558407	24779785	14642202406	41878024	3002095549			
FBI _{Av.2}	194.45	141.81	207.29	649.51	291.71	341.75	304.42			

Table 4: Total assets and its average trend pre and post GER

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above study, it is clear that the average of total assets in companies is three times more than times after the GER. There is unexpected positive growth in Tansee after the GER While the return is same for the pre and post of GER. There is two times growth in all companies except Tansee while return on investment is lower than before except SAFCO. So, there is a need to improve their operational efficiencies and to maximize utilization of resources because it's a situation of overcapitalization in companies

c. Return on equity

Return on equity is the ratio between profit after tax and shareholders' fund (P. Muralidhar, 2010) Return on euity measures the profitability for organizations' owners. The higher return on equity ratio is to be considered favorable for the concern (Ali & Haque, 2017).

Years	Petrochemicals Company									
rears	SABIC	SAFCO.	Nama	SIIG	Sipchem	TANSEE	Average			
2004	27.93	15.54	55.63	28.92	0.83	NA	25.77			
2005	30.73	22.98	74.76	17.82	17.00	17.48	30.13			
2006	27.84	24.29	87.24	20.15	20.52	17.92	33.00			
2007	29.64	36.73	123.91	13.99	19.82	11.13	39.21			
Average	29.04	24.89	85.39	20.22	14.54	15.51	32.02			
2010	17.82	45.34	254.37	7.12	7.68	15.90	58.04			
2011	21.19	50.06	236.28	8.83	12.54	22.15	58.51			
2012	16.77	43.65	260.35	8.87	10.69	14.62	59.16			
2013	16.18	38.22	236.29	11.28	10.71	9.81	53.75			
Average	17.99	44.32	246.82	9.03	10.40	15.62	57.36			

Table 5: Pre and post GER return on equity ratio of petrochemical companies

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above table, it can be observed that it is obvious that SAFCO. and Nama petrochemical companies are improving their return on equity while the return of TANSEE is constant. SABIC, SIIG and Sipchem petrochemicals companies losing their returns on equity.

Petrochemicals Companies										
Years	Sabic	safco	Nama	SIIG	Sipchem	Tansee Average				
Average 1	69315034.8	4947424.8	761336.5	2569682	354683379	3273376	72591705.46			
FBI _{Av.1}	100	100	100	100	100	100	100			
Average 2 (SR)	140719291	8117494.8	1442459	6016324	576399011	11089496	123964012.4			
FBI _{Av.2}	203.01	164.08	189.46	234.13	162.51	338.78	215.33			

Table 6: Shareholders fund and its average trend pre and post GER

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above study of averages of four years of pre and post of GER, it is obvious that the average growth in shareholders fund is twice while return is also two times after the GER. It reflects the increasing growth of return on increased shareholders fund.

All the companies are increasing their shareholders fund in post GER period and shareholders are enjoying the benefits of trading on equity (as their total asset is increasing) due to increased returns on equity. SIIG and Sipchem have to increase their profitability or utilize their blocked funds in business activities.

ii. Liquidity and Solvency or Financial position:

Liquidity and Solvency or financial position of the business organization refers the strong financial position to pay its short term and long term liabilities. The financial position of a business organization is measured by its paying abilities of dues or liabilities. In any business organization, there are two types of responsibilities to payout i.e. short term and long term. To know short term and long term paying ability, current ratio and debtequity ratios are calculated.

a. Current Ratio:

Current ratio is the ratio between current assets and current liabilities (Y.A., Babaloa & F.R. Abiola, 2013) and measures the short term paying ability of the business organization. The higher ratio reflects the strong short term paying ability but there should be optimum current ratio as highest ratio is the indication of blockage in

liquid assets which can be utilized for business activities .The standard current ratio to measure short term paying ability is 2:1 but it will vary according to nature and size of the business (Ali & Haque, 2014).

Table 7: Pre and post GER short term paying ability of petrochemical companies

Vaana	Petrochemicals Company									
Years	SABIC	SAFCO.	Nama	SIIG	Sipchem	TANSEE	Average			
2004	2.23	2.35	0.95	4.19	0.33	NA	2.01			
2005	2.56	2.68	0.96	5.14	6.16	2.32	3.30			
2006	2.88	2.91	0.99	3.88	3.03	2.95	2.77			
2007	2.92	3.47	0.84	3.64	0.92	1.85	2.27			
Average	2.79	3.02	0.93	4.22	3.37	2.37	2.78			
2010	2.64	5.77	0.46	5.14	2.83	1.75	3.10			
2011	3.07	8.15	0.38	4.65	3.49	1.62	3.56			
2012	2.82	7.34	0.38	1.78	3.02	2.75	3.02			
2013	3.03	4.90	0.62	1.41	3.47	1.93	2.56			
Average	2.89	6.54	0.46	3.24	3.20	2.01	3.06			

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the above current ratio analysis, it is evident that the average short term paying ability of petrochemical companies higher than the standard and improved after GER. Only Nama Company's short term paying is not satisfactory while SAFCO's paying ability is three times more than expected or standard. SAFCO can utilize its liquidity in business activities to expand level of activities as its profitability is good.

b. Debt Equity Ratio

Debt equity ratio is the relationship between long term debts and equity capital or shareholders' fund (Y.A., Babaloa & F.R. Abiola, 2013) and measures the long term paying ability or financial soundness of the business organization. Lower debt equity ratio is the reflection of strong paying ability or financial position. But, there should be optimum debt equity ratio in any business because higher ratio is better for the business organization while the cost of capital is lower than expected rate of return of business (Ali & Haque, 2014).

Table 8: Pre and post GER Long term paying ability financial soundness of petrochemical companies

Years	Petrochemicals Company									
	SABIC	SAFCO.	Nama	SIIG	Sipchem	TANSEE	Average			
2004	0.77	0.24	0.26	0.40	1.49	NA	0.63			
2005	0.61	0.30	0.33	0.38	0.88	1.10	0.60			
2006	0.66	0.41	0.41	0.52	0.78	0.72	0.58			
2007	0.89	0.34	0.90	0.59	0.99	1.88	0.93			
Average	0.72	0.35	0.55	0.49	0.88	1.24	0.70			
2010	0.90	0.17	0.50	1.44	1.00	1.40	0.90			
2011	0.76	0.14	0.73	1.57	1.09	1.25	0.92			
2012	0.71	0.13	0.87	1.55	1.13	1.33	0.95			
2013	0.64	0.14	1.04	1.58	1.25	1.41	1.01			
Average	0.75	0.15	0.79	1.53	1.12	1.35	0.95			

Originating source: Calculated from the financial statements of concerned Petrochemical Corporation available at www.argaam.com

From the average of above table it can be said that overall there is a minute improvement in the long term paying abilities of the petrochemical companies after the GER. SAFCO. SABIC, SAFCO, and Nama companies' financial position is strong. SIIG, Sipchem and TANSEE petrochemicals companies are working on equity and enjoying the benefits of external funds. SAFCO can raise external funds to enjoy working on equity as its debt equity ratio is very low while profitability is satisfactory.

CONCLUSION:

From the above industrial analysis it can be concluded that there was no significant differences in financial performances of petrochemical companies before and after GER. From the firm analysis, there was negativity in operational efficiencies of the petrochemicals companies in post GER. All petrochemical companies are expanding their activities or turnover while the operational efficiency is weaker than before GER. The return on assets is likely to equal pre and post GER while assets increased three times after the GER. Return on equity and equity capital increased by two times after the GER and it indicates that companies are increasing their net worth and utilizing external funds to enhance return. The short paying abilities of the industry was more than the expected, it can be utilized to extend the level of business activities. On an average, there was no change in utilization of resources pre ad post GER while there was three times growth noted in total resources. There was improvement in the return on shareholders' fund revealing the utilization of cheaper external funds. All the petrochemical companies of Saudi Arabia have to improve their profitability by reducing cost of sales of petrochemicals products. This study reveals that increased cost of sales was the only factor responsible for the negativity of petrochemical industry as the sales prices was increasing globally after the GER. So, there was no negative impact of the GER on absolute performance petrochemicals industry as the sales of petrochemicals products were increasing globally after GER. In Petrochemical industry of Saudi Arabia, there is no significant difference in relative financial performance of pre and post GER. But, it is evident that, there was absolute amount enhancement in petrochemical sector of Saudi Arabia while manufacturing efficiency got decreased after GER. In this study, there is no consideration of individual products of petrochemical companies. So, there is scope for further studies after taking into consideration of individual products' profitability in petrochemical industry pre and post GER.

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