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The Impact of Energy Crises on the Textile Sector of Pakistan (2005-2010)

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Abstract

This study analyzes the impact of crucial energy crisis on the performance of textile sector of Pakistan for a six year period (2005-2010). For the purpose of comparison this study is divided into two sub periods: pre-crisis period (2005-2006) and post-crisis period (2007-2010). For getting real insight of the phenomenon under study, secondary data has been collected from State Bank of Pakistan Analysis Report on Textile Sector. The methodology comprised of horizontal analysis of the major ratios (profitability, liquidity, asset management and debt management) for the entire period. The profitability ratios such as ROA, ROE and NPM has shown declining trend in post energy crisis period. The debt management and asset management ratios evidenced the ill-management of debts and assets of textile sector during energy crisis period. The liquidity ratio also shows declining trend during and after energy crisis. In Brief, the results allow us to conclude that textile sector has been badly affected in post-energy crisis period as compare to pre energy crisis period.

Keywords: *Horizontal analysis, Textile Sector, profitability, Energy crises.*
JEL codes: *G39, L6, L67, Q13, Q40, Q41, Q43, Y1*

1. Introduction

The textile sector of Pakistan is scrutinized as the backbone of economy of Pakistan (Siddique et al, 2012). It has been playing an integral role in the progression of the country by eradicating unemployment to large extent and expanding the foreign trade for the last 50 years. It contributes approximately 9.5% to the GDP and continues to hold a pivotal position (52% approximately) in the total exports of the country. It provides employment to about 15 Million labor force out of 49 Million which approximates to 30% of work force of the country.

In the continent of Asia, Pakistan holds 8th position among the exporters of the textile products. It is the fourth largest cotton producer and third largest cotton consumer in the world and its availability has led to the expansion of the textile industry. Pakistan's textile sector is highly dependent upon the spinning activity. Currently the textile sector of Pakistan is working with 442 spinning units and 1,221 ginning unit which are producing textile products in the country. (Ahmed Yaseen, 2007).

After independence, the textile sector has grown at rapid pace. In the past five decades, this sector has proved itself by capturing the global markets expanding the foreign trade in the country. Unfortunately, some unfavorable conditions including instability in the political and economic conditions, fluctuations in the global markets, the effects of the pests on the cotton crops and overwhelming energy crises have severely affected the productivity and growth of this sector. Moreover, the skyrocketing petroleum prices, unhealthy government policies, deficiency in the gas supply, overwhelming load shedding of the electricity, escalating raw material prices have dramatically increases the cost of production. (SMEDA, 2011)

The objective of this study is to compare the performance of the textile sector of Pakistan before and after energy crisis.

2. Literature Review

Electricity is important for any industrial activity or for any sector but its availability in Pakistan is limited due to the scared resources. The textile sector consumes around 38 percent of electricity in chemical processing, 34 percent in spinning, 23 percent in weaving and 5 percent for miscellaneous purposes. Ahmed Aliya, 2012 (Senior R&D Officer)

Afzal.Yaseen (2012) mentioned fast urbanization and industrialization the major reasons behind the escalating demand of electricity.

The shortage of electricity and high interest rate raised the cost of production of textile industry. This shortage decreased the production of the textile industry because the factories operate less time due to load-shedding. Less production led to high fixed cost per unit. Generating electricity privately is also requires huge amount of money. This electricity crisis highly impacted the growth of the textile industry of Pakistan. (Afzal.Yaseen, 2012)

The energy crisis arose in Pakistan in FY 2007. It affected all the manufacturing sectors of the country but textile sector, being energy intensive industry, has been widely affected by these crises. It ruined the profitability of this sector by increasing the cost of production and expenses. The major causes to increase in the cost of production include instant rise in electricity tariff, shift to alternative source of energy like generators, load-shedding, rising fuel prices, and unavailability of adequate energy resources. These worsened situations badly affected the competitiveness of textile industry in international market. (Siddique et al, 2012)

Alam (2011) studied the impact of financial crisis on textile sector of Pakistan. He concluded the debt equity ratio of many firms increased due to financial and energy crisis and these firms were less probable to survive in international markets.

Khan & Khan (2010) mentioned in his study that the textile sector of Pakistan is facing new challenges. Great decline has occurred in growth rate of industry. This decline can be identified from below table:

Trend of Textile Industry During 2005-2010	
2005-06	11.23%
2006-07	8.40%
2007-08	4.05%
2008-09	-0.70%
2009-10	-1.78%

(Source: Economic Survey of Pakistan State Bank of Pakistan)

According to Jatinder and Caesa (2008), political instability clogged the foreign investment in the textile sector which in turn affected the economy of Pakistan. This hindrance was so small than energy crises which got severe from the FY2007. They led to shutdown of factories and increased unemployment. Moreover, the biggest problem was the unfair quota system thrown by developed nations which lead to market division/termination.

According to Khan and Khan (2010) although Pakistan’s history shows that textile sector was expanding since 1947 but since 2007 it is contracting. They mentioned following reasons which contributed to the contraction of this sector:

- Load shedding of the electricity
- Increase in the prices of oil

- Increase in the prices of gas
- Lack of Research and Development in Cotton Sector
- Increased prices of raw material
- Lack of new technology
- Reduced quality of finished goods
- Lack of transportation facilities
- Increase in the wage
- Political instability

The literature on this sector has focused on the impact of financial crisis, electricity crisis and interest rate on textile industry of Pakistan, growth trend of Pakistan Textile industry and identified the variables of energy crisis but no one has measured the impact of energy crisis on the performance of textile sector of Pakistan. This research will fill this gap by taking whole textile industry into consideration. The purpose of this paper is to analyze the impact of crucial energy crisis on the performance of textile sector of Pakistan for a Six years period (2005-2010). For the purpose of comparison this study is divided into two sub periods: pre-crisis period (2005-2006) and post-crisis period (2007-2010).

3. Research Methodology

Data Collection: Data collection is the most important phase for any research. Mostly, the real world data provides true and reliable results. For getting real insight of the phenomenon under study, we have collected secondary data from two reliable sources. (1) The annual reports of textile sector from FY 2005-2010 and (2) The financial statement analysis report of State Bank of Pakistan (SBP).

Sampling Design: In this study the whole textile sector has been selected for analyzing the performance of this sector before and after energy crisis period from 2005 to 2010. The ratio analysis is the most reliable tool for analyzing the performance of any organization or industry in business (Abbas et al, 2012). For this research we have conducted horizontal analysis of following ratios.

- Return on Asset (ROA)
- Return on Equity (ROE)
- Net Profit Margin (NPM)
- Debt Equity Ratio
- Financial Expense Ratio

- Current Ratio
- Asset Turnover Ratio
- Inventory Turnover Ratio
- Dividend Current Ratio
- Earning Per Share

Hypothesis

H_1: The performance of textile sector has been declined after energy crisis.

4. Data Analysis and Results

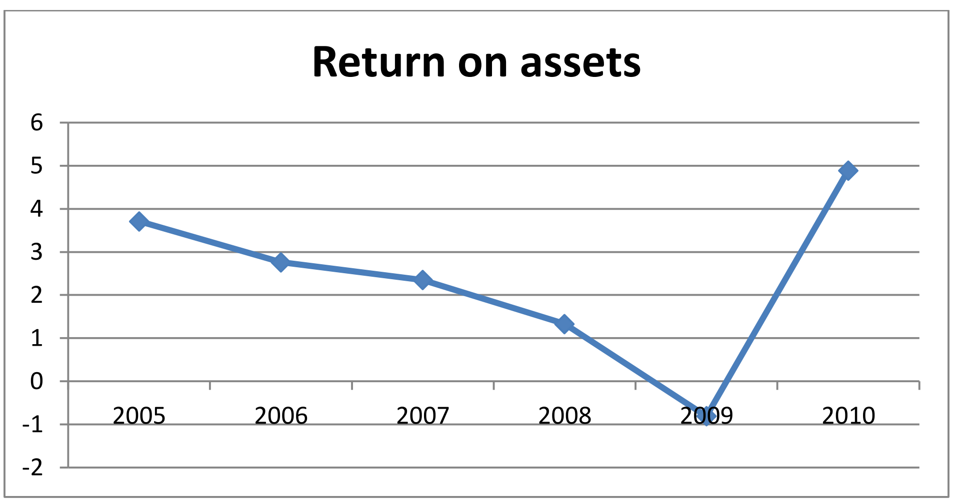
The performance of textile sector is evaluated through horizontal ratio analysis from 2005 to 2010. Major accounting ratios covering multiple aspects of performance are taken into consideration. These include; liquidity ratios, Asset Management Ratios, Profitability ratios and Debt Management Ratios

Horizontal Comparison of accounting ratios

Table1: Return on Assets

Years	2005	2006	2007	2008	2009	2010
Return on assets	3.71	2.76	2.35	1.33	-0.81	4.89

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

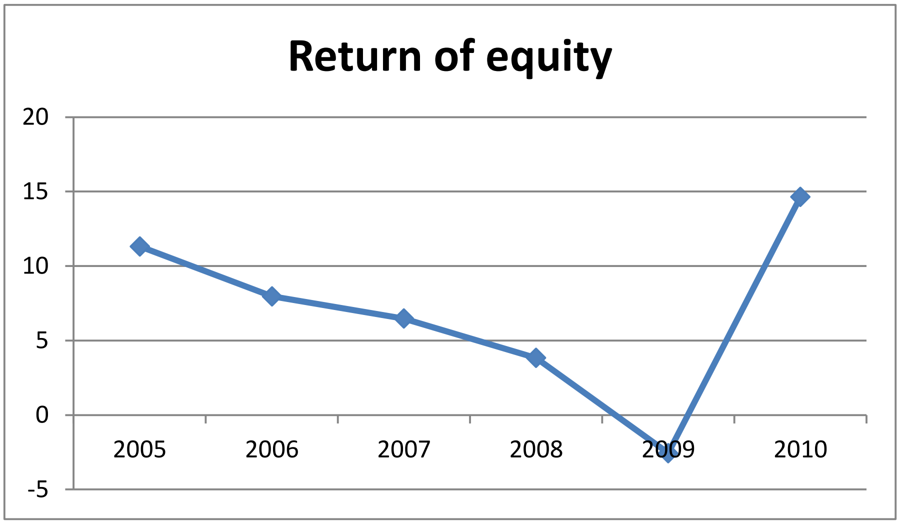


The above chart and table depicts the ROA of the textile sector before the energy crisis period was 3.71% in 2005 and 2.76% in 2006. Moreover during the energy crisis period in 2007 it decreased to 2.35 and the trend continued in the post crisis period. A striking decline occurred in the FY 2009 that completely converted this profit into losses. This up and down trend of confirms that the profitability of textile sector has been affected to a large extent by the energy crisis.

Table 2: Return on Equity

Years	2005	2006	2007	2008	2009	2010
Return of equity	11.32	7.97	6.47	3.83	-2.56	14.64

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

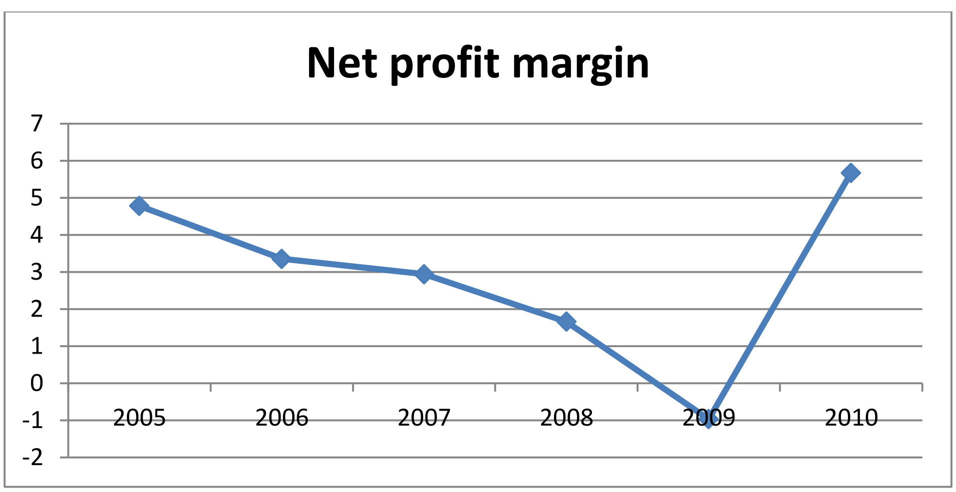


In the pre-crisis period, the ROE was 11.32% in 2005 and 7.97% in 2006.Whereas, during energy crisis period it declined to 6.47% and after that the return converted into losses (-2.56) in 2009. After this it stabilizes again in 2010. This trend of profits and losses indicate profitability of the sector was better before the energy crisis.

Table 3: Net Profit Margin

Years	2005	2006	2007	2008	2009	2010
Net profit margin	4.78	3.35	2.94	1.66	-0.97	5.67

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

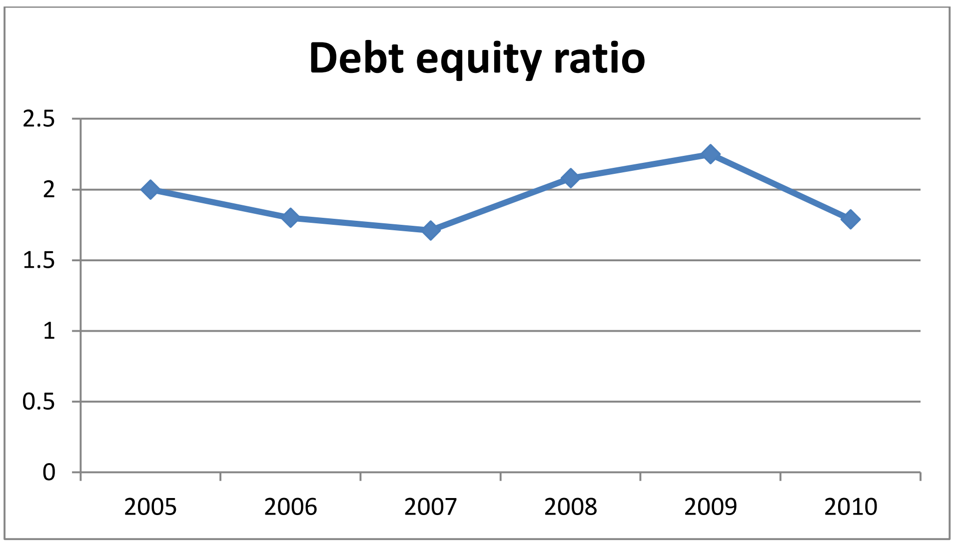


The NPM (Net profit on sales) before the energy crisis was 4.78% in FY 2005 and 3.35% in 2006, during the crisis period in 2007 it was 2.94. However it started declining dramatically in post crisis period, 1.66% in 2008 and finally converted into losses in the year 2009 (-0.97%). The industry started stabilizing in the year 2010 and again converted into the profit. This declining and rising trend of NPM shows that the profitability decreased in the post crisis period and confirms the impact of energy crises on the sector.

Table 4: Debt Equity Ratio

Years	2005	2006	2007	2008	2009	2010
Debt equity ratio	2	1.8	1.71	2.08	2.25	1.79

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)



Debt equity ratio shows a declining trend in the pre-crisis period. In 2005 the debt was 2% of the equity in 2006 it declined to 1.8% of equity. However if we observe the post crisis period we see a rising trend of debt from 1.71% in 2007 to 2.25% in 2009 after it again reduced to 1.79% in the year 2010 which is marked as the stabilizing year for that sector.

Table 5: Financial Expense as % of Sales

Years	2005	2006	2007	2008	2009	2010
Financial expenses as % of sales	3.46	5.44	6.32	7.47	8.9	6.53

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

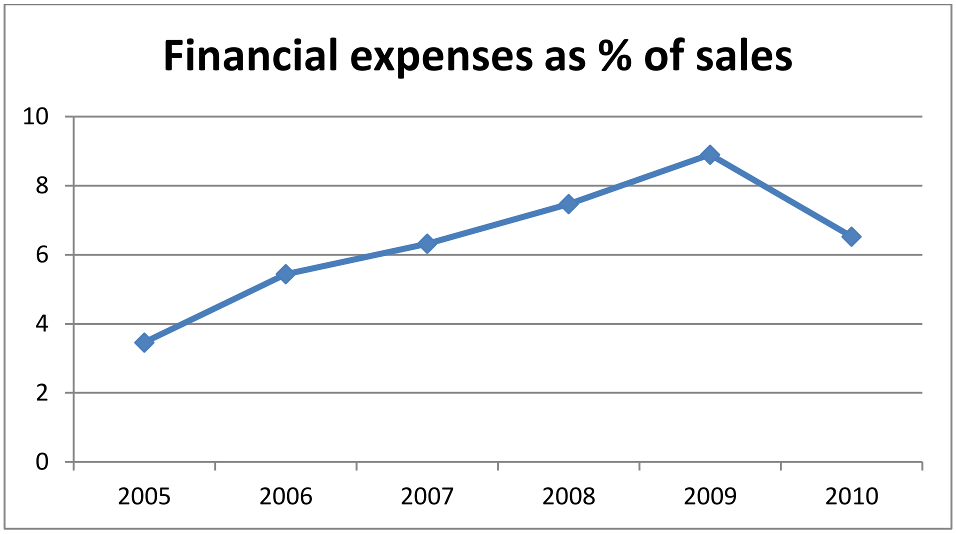
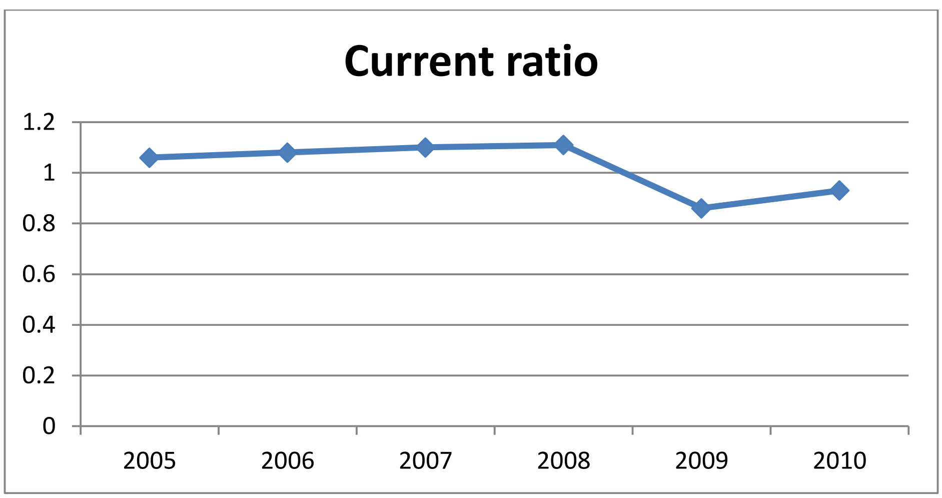


Table no 5 shows the increasing trend of financial expenses ratio as % of sales from 2005 to 2009. However it stabilized in the year 2010.

Table 6: Current Ratio

Years	2005	2006	2007	2008	2009	2010
Current ratio	1.06	1.08	1.1	1.11	0.86	0.93

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

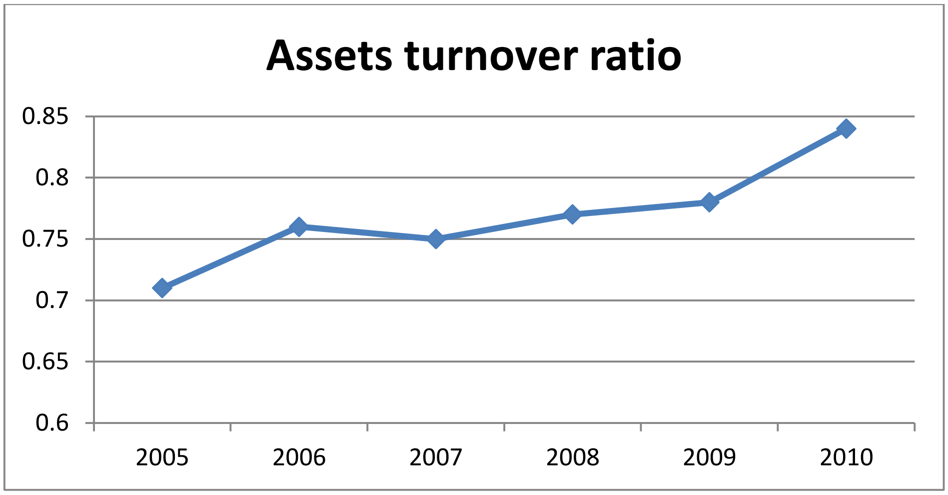


The current ratio helps us in identifying the liquidity position of the textile sector. It is observed from the above table that the industry had the liquidity of Rs.1.06 for the payment of Rs.1 debt in 2006. Although it shows increasing trend before the energy crisis but in the post crisis period marks the decline in the liquidity position as compare to the pre-crisis period. Moreover it is not still recovered in the year 2010.

Table 7: Total Assets Turnover Ratio

Years	2005	2006	2007	2008	2009	2010
Total Assets turnover ratio	0.71	0.76	0.75	0.77	0.78	0.84

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

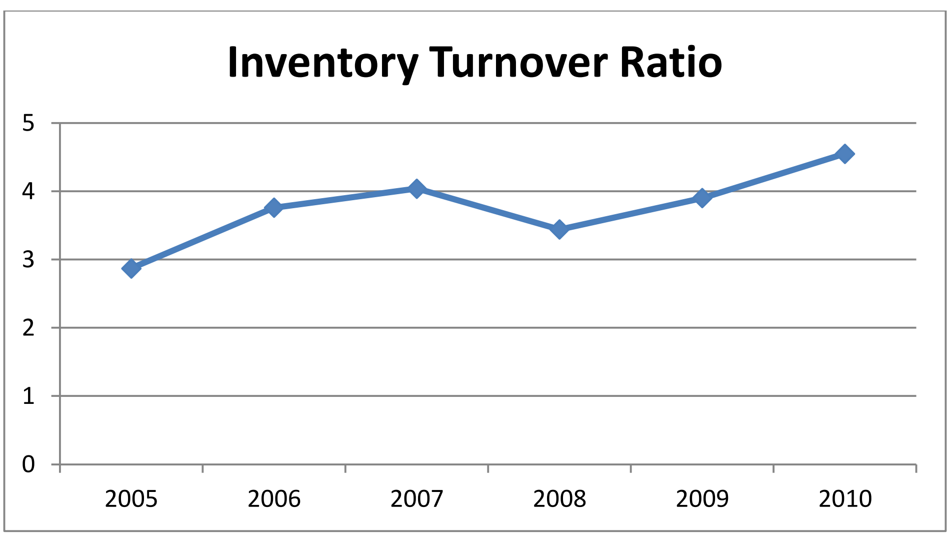


The pre-crisis period shows the increasing trend in asset turnover ratio which decreased to 0.75 in 2007. Later on, the post crisis period represents again rising trend.

Table 8: Inventory Turnover Ratio

Years	2005	2006	2007	2008	2009	2010
Inventory Turnover Ratio	2.87	3.76	4.04	3.44	3.9	4.55

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

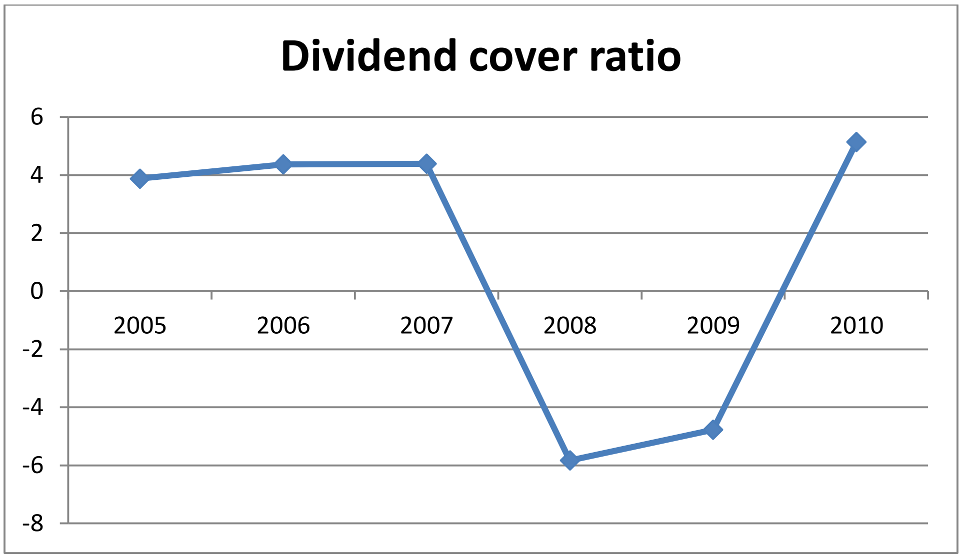


Above table and graph shows that inventory turnover ratio was increasing before energy crisis period; 2.87% in 2005, 3.76% in 2006 and 4.04 in 2007. But after the energy crisis period, it dramatically decreased to 3.44 in 2008 and again that is sector recovered its inventory turnover to 4.55% in 2010.

Table 9: Dividend Cover

Years	2005	2006	2007	2008	2009	2010
Dividend cover ratio	3.88	4.37	4.39	-5.83	-4.77	5.14

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

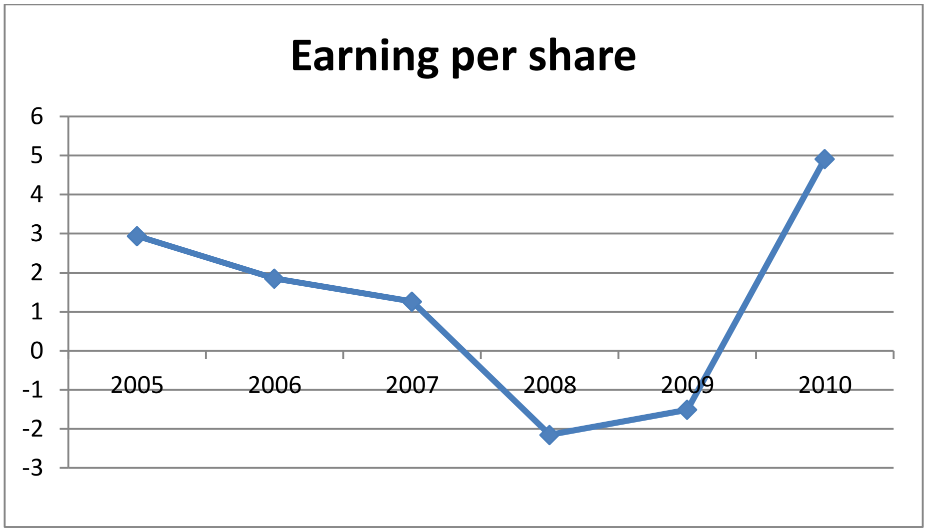


Dividend coverage ratio shows that it increased in the pre-crisis period from 3.88% in 2005 to 4.37% in 2006. However it remains stable during the crisis period in 2007. Point to be noted here is that there is gigantic downturn in the dividend ratio. In 2008 it decreased to -5.83% and showed slight improvement in 2009. Moreover, it increased to 5.14% in 2010.

Table 10: Earning Per Share

Years	2005	2006	2007	2008	2009	2010
Earning per share	2.94	1.85	1.26	-2.15	-1.51	4.91

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)



The above table shows the pattern of earning per share, the EPS was Rs. 2.94 in 2005, Rs. 1.85 in 2006 and Rs. 1.26 in 2007. It converted into losses in the post crisis period; Rs. -2.51 loss per share in 2008 and Rs. -1.51 in 2009.in 2010 the loss converted in to profit Rs.4.91 in 2010 which is highest in the of the past six years performance.

Table 11: Overall results of the study

Years	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Return on assets	3.71	2.76	2.35	1.33	-0.81	4.89
Return of equity	11.32	7.97	6.47	3.83	-2.56	14.64
Net profit margin	4.78	3.35	2.94	1.66	-0.97	5.67
Debt equity ratio	2	1.8	1.71	2.08	2.25	1.79
Financial expenses as % of sales	3.46	5.44	6.32	7.47	8.9	6.53
Current ratio	1.06	1.08	1.1	1.11	0.86	0.93
Assets turnover ratio	0.71	0.76	0.75	0.77	0.78	0.84
Inventory Turnover Ratio	2.87	3.76	4.04	3.44	3.9	4.55
Dividend cover ratio	3.88	4.37	4.39	-5.83	-4.77	5.14
Earning per share	2.94	1.85	1.26	-2.15	-1.51	4.91

Source: (Financial sector analysis of the whole textile sector by SBP, 2005-10.)

Objective	**Hypotheses**	**Result**	**Status**
1. The objective of this study is to compare the performance of the textile sector of Pakistan before and after the energy crisis.	H_0**:** The performance of textile sector has not been declined after energy crisis. H_1**:** The performance of textile sector has	After analyzing all major accounting ratios, it is concluded that performance of textile sector has been declined after energy crisis. Moreover, the energy crisis severely affected	H_1:PROVED Hence H_1 Accepted

	been declined after energy crisis.	profitability, liquidity, expenses and debt management ability of the textile sector.	

5. Conclusions and Recommendations

This study fills the gap in literature by examining the impact of energy crisis on the performance of textile sector of Pakistan. The study covers a six year period from 2005 to 2010; divided into a two year pre-crisis period and a three year post-crisis period. The trend of all the major accounting ratios reveal that whole textile sector has faced severe losses due to the extensive energy crises in the FY 2007 and afterwards. We concluded that hypothesis "The performance of textile sector has been declined after energy crisis" is accepted because figures of liquidity ratios, asset management ratios, debt management ratios and profitability ratios shows huge decline after energy crisis.

The findings of this research will probably help the top management of textile sector in making important decisions and in contingency planning for unexpected events. Moreover, it will provide an insight into activities which require consideration for improving the performance of the textile sector. Further research can be conducted to analyze the impact of energy crises on the exports of textile and its effect on trade balance of the country.

References

Abbas, F., Rehman, M. & Perviz, A., 2012. Impact of Finanacial Crisis on Textile Sector of Pakistan. *Information Management and Business Review,* 4(7), pp. 409-410.

Afzal, H., 2012. Impact of Electricity Crisis and Interest Rate on Textile Sector of Pakistan. *Academy of Contemporary Research Journal,* 1(1), pp. 32-33.

Alam, I., 2011. *Impact of Energy Crisis on Txtile Sector of Pakista: Evidence from Faisalabad,* s.l.: South Asia Network of Economic Research Institute Workin Paper.

Jatinder, S. &. C. B., 2008. *Cotton Textile Apparel Sector of India: Situation & Challenges Faced,* , s.l.: International Food Policy Research Institute .

Khan, A. A. &. K. M., 2010. Pakistan Textile Industry Facing New Challenges. *Research Journal of International Studies,* May, Volume 14, pp. 2-6.

Malik, A., n.d. Power Crisis in Pakistan: A crisis in Governence. *Pakistan Institute of Development Economics Islamabad,* pp. 1-34.

Naqvi, F., Yousuf, U. & M., A., 2011. Textile Sector PErformancce of Pakistan. *Journal of Middle Eastern Finance & Economis,* Volume 13, pp. 1-9.

Siddique, Rizwan, D. & Iffat, S. &., 2012. *Syndicate Report-VI,* s.l.: Federal Board of Revenue (FBR) Pakistan.

SMEDA, 2011. SME Observer Quarterly. *Small and Medium Enterprise Development Authority Journal*, *Pakistan*, 1(3), pp. 6-8.

Yaseen, A., 2011. *Textile Industry of Paksitan,* s.l.: Horizon Securities (SMC- Pvt) Ltd.

http://www.thetextileicon.com/blog/2011/08/20/government-of-pakistan-wearisome-to-tears-down-the-textile-industry/ [February 7, 2012].

Italian Trade Commission-Karachi (2009) [Online] Available:
http://www.cr.camcom.it/Textile_Report_2009-2010_Pakistan.pdf [February 20, 2012]

Economy Survey, (2009, June 31), Ministry of finance. [Online]Available:
http://www.finance.gov.pk/survey_0910.html [February 13, 2012]