# Impact of Petroleum and Electricity Prices Strategies on Manufacturing Performance of Textile Industry (A Case Study of Leading Five Organiztions in Pakistan)

Adeel Ahmed,


Tahir Ali


Karachi University Business School University of Karachi,
Pakistan


hassanadeel393@gmailcom.

**Abstract**

This research aims to explain the relationship of electricity pricing strategy and petroleum pricing strategy on manufacturing performance of textile industry in Pakistan. Current research was employed a total of three variables in which petroleum pricing strategy and electricity pricing strategy considered as independent variable however, manufacturing performance is the dependent variable. A across sectional data was gathered by using a questionnaire instrument from the working professionals of textile sector. A total of 100 questionnaire was distributed in the textile manufacturing firms. PLS and SPSS was used for the estimation of results. Structure equation modeling based on confirmatory factor analysis and path analysis was employed to investigate the proposed hypotheses. Confirmatory factor analysis was employed to explain the reliability and validity of questionnaire and gather data. Path analysis used to estimate the relationship between independent variables and dependent variables. Findings of the research reveals that both petroleum price strategy and electricity pricing strategy has significant impact on the manufacturing performance of textile sector.

Keywords: **Electricity pricing strategy,Petroleum pricing strategy, Manufacturing Performance**

## Introduction

### Background of study

Petroleum products are considered as essential raw material for the industrial production. Petroleum product prices significantly impact on the cost of production, energy bills and other costs (Reddy et al., 2011). In the recent decades, high volatility and shocks faced by petroleum prices significantly influence on the economic growth of developing and emerging countries (Berument et al., 2010; Moshiri&Banihashem, 2012). More specifically, fluctuation in the prices

of Petroleum significantly impact on the economic growth in terms of several channels (Amiri et al., 2021; Rotimi&Ngalawa, 2017). In terms of supply of petroleum, inflation in the oil prices results in the higher increase in the price of commodities and goods (Cunado et al., 2015). In a fact, higher petroleum prices reduce purchasing power of consumer (Jamali et al., 2015), that ultimately impact on the investment and production decisions of firms (Aye et al., 2014).

On the other hand, electric energy also is the primary input source consumed by the textile industry in the production process (Elliott et al., 2019). Most of the production cost in the textile industry is based on the cost of electricity (Palamutcu, 2010; Shahbaz, 2015). Stages in the manufacturing industry are very intensive to the electricity consumption. Electricity consumptionis the most of the commonly used energy input in the clothing and textile plants for machinery operations, heating and cooling of production material (Angelova et al., 2021; Palamutcu, 2010). Previous studies found that about 93% of the total energy consumed in the spinning process, 65% percent in the manufacturing of clothing, 43% in the wet processing and 85% used in the waving process (Palamutcu, 2010). Textile industry is one of the leading manufacturing in the Pakistan that significant impact on the economic growth and export income (Hussain et al., 2020;Khan & Khan, 2010). Annual production of the textile sector is about 9.6 billion US dollar estimated (Khan & Khan, 2010). Stable growth of Pakistani clothing and textile sector decline in the last 5 years due to the instability in the Petroleum and electricity prices. A global competitionin the clothing and textile products force the textile industry to satisfied the ultimate consumer by sustainable production process (Baskaran et al., 2012; Niinimäki & Hassi, 2011). A studyconducted by Ozturk et al. (2016) stated the components of production material in which, energy cost is the main and significant factor in the textile industry. Furthermore, petroleum and electricity consumption rate of the textile sector in whole industry is much higher.

Previous literature and empirical studies found a significant and negative impact of the petroleum prices on the production of textile industry (Afzal, 2012; Zhao & Lin, 2019). Some of the studies also explain that petroleum shocks impact on the countries differently that import the petroleum rather than export (Filis et al., 2010; Mokni, 2020). For instance, previous literature shown that inflating the oil prices reduce textile production of oil importing countries hence, the higher Production and manufacturing cost impact on the economic output and growth level (Ahmed et al. 2017). In contrast, another study reported impact of petroleum prices shocks on themanufacturing process in the oil exporting countries (Qiang et al., 2019). Impact of proper petroleum prices on the manufacturing of textile industry in various ways and channels. According to the study boom in petroleum prices reduce the trade of oil exporting countries (Iwayemi, et al., 2010). When petroleum prices are increases a decrease in the demand level Shown by the oil importing countries (Kilian, 2009).

Current study explores the response of textile production against change in petroleum and electricity prices strategy. From the above discussion, previous studies shown that change in the

electricity and petroleum prices significantly disturb manufacturing process of textile industry and Pakistan economy is mostly depending upon the textile production. Shocks in the petroleum and electricity prices reduce textile production and exports of Pakistan. Hence ultimately customer demands, satisfaction and availability of products on time reduces. Energy issues and deficit in the Pakistan significantly impacts on about all manufacturing processes of corporate sectors. Various studies are conducted on the manufacturing impact of petroleum prices. However, little attentions paid on the textile manufacturing in the context of Pakistani industries. Therefore, it is important issue to investigate the impact of Petroleum and electricity prices on the manufacturing process of textile industry in the context of developing economy in like Pakistan. For this purpose, current study employed the cross-sectional data collected from the industry managers and executives. A survey is conducted on the textile manufacturing industry through questionnaire based developed instrument for the collection of data on manufacturing performance, Petroleum price strategy and electricity price strategy.

## Problem statement of the study

Pakistan is one of the most oil importing country in the South Asian region. Most of the exports in Pakistan are based on the Agricultural Products. Due to the increasing of population demand for petroleum products and electricity becomes highly. Economy of the country is  mostly affected by the Global Oil prices. Because of the high volatility in the exchange rate, oil prices become inflate very quickly. Hence the instability in the oil pricing strategies significantly influence on the industrial production and process. Because of changing oil prices, agriculture products become costly which ultimately lowers buying power of the consumer. Moreover, changing in oil prices significantly impact on the cost of electricity. Due to change in electricity prices, expenses for the energy bills and operating cost of the machinery become high. Becauseof inflation, input cost of the production in the textile industry inflated which  ultimately influence the management decision making regarding manufacturing process. Manufacturing andproduction process of textile industry high influence by the pricing strategy of the Petroleum andelectricity which is considered as important and significant component  to operate an industry. For this purpose, current study try to elaborate the impact of Petroleum and electricity pricing strategy on the textile production performance of Pakistan.

## Significance of Research

Numerous studies are conducted on the volatility of electricity and petroleum prices in relation to exchange rate, stock market, agriculture commodities. However, few studies investigate in the context of textile manufacturing process. Pakistan economy is based  on the textile production and most of the trading  includes the agriculture exports and petroleum imports. Hence, the Global pricing directly impact on the manufacturing performance of the industry. In addition, to its change in electricity prices also influenced by the petroleum demand and supply. In a fact,

volatility in the oil prices directly change the cost of electricity consumption. Therefore, study provide the guidelines for the policy makers and investors to predict the manufacturing performance of textile products. Movement in the oil prices change the production performance, investors' decisions that contribute in the investment of agriculture products, watching the international pricing strategy of petroleum. Investor predicts that change pricing strategy reduce their Returns because of low sales.

## Literature Review

### Petroleum prices strategy and Manufacturing Performance

Volatility and shocks in the petroleum raised a serious issue for Academics Scholars and policy makers at global level because of crucial impact on the oil importing countries. Change in petroleum prices impact on the economic growth of a country by creating disturbance in major corporate sector and textile sector is one of them (Berument et al., 2010). Instability in the industrial sector manufacturing derived because of fluctuation in the petroleum prices (Clements et al., 2007; Saari & Rashid, 2007). In the last 5 years fluctuation in the petroleum prices change the world economic activities more rapidly. Hence to stabilize the economic activities a sustainable and constant pricing strategy required for the petroleum products. Pricing strategy ofa petroleum play significant role in the Industrial and commercial sectors because of basic input to operate them (Saari & Zakariah, 2006). Changing oil pricing strategy reduce the utilization capacity of a corporate sector (Alper, 2018). Ahmed et al. (2012) stated that corporate sector unable to produce in a full capacity because of fluctuation in the cost of production buy uncertainty in the oil pricing strategies. In the manufacturing process, corporate sector have adverse effect on the real demand, customer satisfaction and production process (Lee & Ni, 2002). According to study conducted by Van Hoang et al., (2020) oil prices dynamics significantimpact on the production process of corporate sector. In earlier literature academics scholars and researchers found the significant relationship between the petroleum price shocks on economic growth of different economies. Furthermore, a study conducted by (Suhardi et al., 2013) found that changing oil prices significantly influence on the industry output and manufacturing process.Another study validated these findings by investigating the relationship between industry manufacturing process and Petroleum pricing strategy (Saari et al., 2008). According to Varahrami et al. (2020) the signaling theory behavior of two parties are significantly related with each other because of different information access by them. According to the theory one party considered as sender who pass the information to other party that utilize the information and required the decision makings. Information has significant impact on the decision makings of thereceivers. Price information about petroleum products change structure of manufacturing industry. Hence, Alao and Payaslioglu (2021) found changing information about the stability of oil prices influence the management decision makings regarding the production and

manufacturing process. Due to the symmetric information between the parties regarding in the petroleum products influence on the production growth (Lee & Ni, 2002).

A study conducted on the relationship between oil market volatility and agriculture commodities. Findings shows that production in the agricultural commodities varied because of petroleum prices shocks (Luo & Ji, 2018). A number of studies conducted on the shifting petroleum prices that influence the marketplace (Liu et al., 2013; Mansour et al., 2020). A study conducted by the Hubbart and wiener (1986) on the oil importing countries, stated a significant influence of oil supply disruption on International Corporation. Furthermore, the study also discussed transmission of information about the petroleum prices also impact on the supply and demand. Findings of the study suggested that shocks in the petroleum prices significant role in the industrial productivity and higher inflation. Du et al. (2011) describe, a sustainable petroleum pricing is essential for agriculture market that is required for the productivity and economic stability of a country. Another study demonstrated the relationship between transfer of risk between industrial production and oil prices, which creates disturbance in the economy because of low investment and production level. Furthermore, volatility spillovers also significantly influence the agricultural commodity prices. Findings of the study shows that price of a one commodity significantly influence the prices of substitute commodities (Mensi et al., 2015). A research examined the relationship between the oil price movement and the agriculture commodity. Findings of the study suggested that crisis in the agriculture and  food products by the volatility of petroleum dynamics (Wang et al., 2014). Volatility transmission among agricultural market and crude oil significantly associated in the Chinese economy (Zhang & Qu, 2015). Another study found the cross correlation between the crude oil and agriculture products (Vo et al., 2019). Hence, from the above literature discussion we proposed that

H1:  Petroleum price in strategy has a significant impact on the Manufacturing Performance.

 **Electricity Pricing Strategy and Manufacturing Performance**

In many development countries like Pakistan a crucial barrier in the economic growth is insufficient supply of electricity (Azam et al., 2020). Shortage of electricity and change in its prices specification in the South Asian countries, on the average many firms are experiencing outage per day (Timilsina&Toman, 2016). In South Asian countries Pakistan facing more severe shortage of energy crisis in the last 5 years (Kazmi et al., 2019). More than 75% of the corporate sector in the Pakistan facing electricity shortage and pricing volatility that is  significant constraint of production and Manufacturing operations specifically in the textile industry (Kessides, 2013). Volatility in the electricity prices because of the shortage of energy resources and failure to meet the demand of domestic consumption (Jamil, 2013). Ugwoke et al., (2016) stated electricity consumption is considered as main input for the business process and pricing changes disturb the firms' productivity. Several studies are conducted on the impact of electricity pricing on the productivity of corporate sector (Al-Ghandoor & Samhouri, 2009; Ai et al., 2020;

Olufemi, 2015). A study conducted on the electricity Input and the manufacturing cost of production. Findings of the research indicates that electricity prices significantly impact on the unit cost of production (Doe & Emmanuel, 2014). Another study examine the relationship between corporate sector productivity and electricity shortfall (Xu et al., 2022). Study found that electricity is the basic input of manufacturing and production process hence energy considered assignificant part of the operational cost. Electricity prices are significantly contribute in the production cost of textile sector (Alkaya & Demirer, 2014). Since the corporate sector is main input of economic growth and electricity is important input in the manufacturing process so, investigating how a textile manufacturing has main problem with electricity pricing strategies that is very important for the policy maker and Academics scholars.

Potential in the changing electricity prices behavior impact on the production strategy because of higher input cost incurred on the energy consumption (Ozturk, 2005). Fuel prices also impact on the electricity generation that directly impact on the corporate manufacturing (Ayakwah & Mohammed, 2014). Moreover, switching of corporate sector from raw material to the semi-finished inputs for the production also impact on the manufacturing process of the industry in the textile sector. Furthermore, because of the changing input raw material textile industry force to change their Production and Manufacturing plant (Poudyal et al., 2019).

Pakistan is facing message shortfall of electricity since last decade. Domestic shortfall of electricity creates difference between the projected supply and demand, which have been increasing per year and estimated increase in electricity demand about 26% in 2013 (Shah & Solangi, 2019). To meet the supply government implement blackout about 6 to 12 hours per day (Xiang et al., 2021). Moreover, multiple pricing strategies and distortions in the institutions also enhance the energy crisis in the Pakistan. Historically in the Pakistan electricity pricing are being applied lower than the cost of supply. In addition tariff reforms on the electricity prices reduce the subsidy on the consumption of electricity (Abbasi et al., 2021). Regarding electricity, under pricing strategies undermine the subsidies given on the electricity. Institution problems regarding distribution and pricing strategy significantly impact on the production process and manufacturing activities of corporate sector. Pricing strategies of electricity effect on the firms' production in several ways. First because of high pricing strategy, corporates invest in the expensive petroleum based generators hence the capital divert into the unproductive usage (Bogdanov et al., 2019). Because of higher electric prices strategy manufacturing operations are shutter down which creates the wastage of semi flexible and non-flexible inputs in terms of labor, material and spoilage of finish goods (Ma et al., 2020). A continuous increase in electricitypricing because of the shortage manufacturing sector prefer to purchase rather than manufacturing of semi-finished goods. Because of higher cost of outsourcing, significantly enhance the production cost of goods and services. Finally, electricity prices forces a corporate sector to use a substitute way that is not much intensive to the energy consumption (Wu et al., 2019). A production for process that is not intensive to electricity also tend to the technological

advancement, that ultimately results in undermining of long term manufacturing growth rate. Hence following hypothesis proposed

H2:  Electricity price in strategy has a significant impact on the Manufacturing Performance

**Data and Methodology**

SPSS was initially used for the screening of data. Survey responses that remains incomplete are remove from the data and each question or item was coded on the basis of factor analysis. Descriptive statistics of the respondent shows the information about their demographics in terms of income, gender and age. To estimate the proposed hypotheses and achieving the aim of study structural educational Modelling and the confirmatory factor analysis estimated on the smart PLS. Structural Equation modeling (SEM) is a technique that is used to the estimate the relationship between the latent variables on the basis of their concerned items. SEM is a technique used by researchers and academic scholars in the Social Sciences. Estimation of results is based on the measurement model and the structure model. In the measurement model results estimate the reliability and the validity of collected data. Measurement model, basically estimate the confirmatory factor analysis to determine the construct reliability and validity of results. However, structure equations modelling involved in estimation of multiple equation simultaneously to estimate the relationship between latent variables and concepts used in the model.

**Conceptual Model**

In the recent researches relation of petroleum prices volatility with industrial manufacturing. Our research extends the previous work in by investigating the impact of petroleum and electricity pricing strategy on textile manufacturing performance of the Pakistan. Based on our Hypotheses following model is proposed:
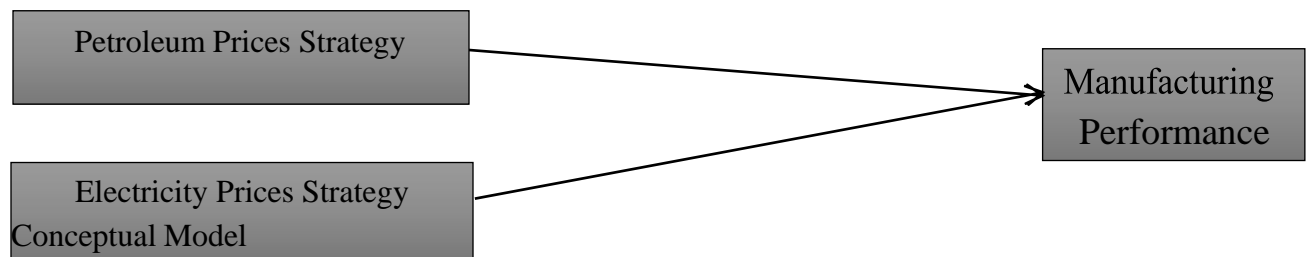


**Sampling process and description of data**

A convenience-based sampling is used in the collection of data because it is not easy to access all employees of textile and manufacturing industry in the context of Pakistan. Convenience method is widely used in the sampling process. Instrument develop and the collection of data from survey conducted in the different parts. First 15 questions based on the latent variables while three questions are included to get information about the demographics of proposed respondents. Furthermore, sample contain 100 respondents work in the textile industry of Pakistan located in the Karachi. All participants are selected based on the permanent employ of textile firms.

Data collected from the industry with the corporation of manager and executives. Some of the respondents filled the questionnaire through Google form. A link of Google form sent by mail to them. About 100 questionnaire distributed to the respondents and return by them. Data Collection process was proceed in the December 2022 and January 2023. A five point scale was used to estimate the degree of response and measuring the variables ranging strongly disagree to strongly agree. The questions and the items involved in the survey or adopted from the previous studies. The questions that rate the production performance, electricity pricing strategy and the petroleum pricing strategy were adopted from previous studies. Questions related to the production performance are adopted by the study of Terdpaopong et al. (2021) while, the questions regarding electricity and petroleum prices adopted by the study (Thanabordeekij, & Syers, 2021). The details of the items and question are used in the study provided in the appendixafter references.

**Measurement model**

Confirmatory factor analysis model developed to estimate the reliability and validity of constructs. Each variable is loaded on about four items. To check the reliability of a data inter- item correction estimated through Chrone Backs Alpha. In addition, composite reliability of each variable is estimated. Estimation criteria for both inter item correlation and construct reliability isbetween 70% and 90% consider as satisfactory while above 80% is a good criteria. However validity of the propose variables estimated on the basis of convergent validity and discriminant validity. Convergent validity estimate through standardize factor loading and average various extracted. While discriminant validity estimate the relationship between items of same construct and other construct. criteria for the standardized factor loading is 70% while 50% is the good criteria for the average variance extracted for items of each related variable. Discriminant validity considers higher covariance or correlation between the items of individual construct and low relationship between the items of different latent variables (Hair et al., 2014).

## Results and Findings

## Demographics Profile

Three demographic variables were developed in this study. The first variable was devised to know the gender of respondents who contributed in study. This was designed to know the ratio of male and female respondents. The second variable was developed to know the participants agewhich starts with less than 50 to more than 35. The third variable was related to the education which was based bachelor to Masters. Table I shows that out of 100 respondents there were 17 females, whereas 73 were Male which proves that the majority respondents contributed in study were male. Besides this, the 67 respondents belong from the age bracket of were from 25 to 30 years, 31 were from 36 to 40 years and remaining 2 were equal to or more then 41. This shows that the majority participants were from the age bracket of 25 to 30 years. Lastly, about 3 respondents were having education to Undergraduate, 76 were having graduation and 21 respondents were having masters

Table I

| Variable | Category | Frequency | Percent |
|---|---|---|---|
| Age | 25-30 | 67 | 67.0 |
| | 36-40 | 31 | 31.0 |
| | 41-45 | 2 | 2.0 |
| Gender | Male | 83 | 83.0 |
| | Female | 17 | 17.0 |
| Education | Undergraduate | 3 | 3.0 |
| | Graduate | 76 | 76.0 |
| | Masters | 21 | 21.0 |

**Descriptive Analysis**

In this section research explain the descriptive analysis for all variables of the study. Table II shows the mean, standard deviation and Pearson correlation between the Independence and dependence variables. Mean value of all variable is range from 2.89 to 3.01. However, the value of standard deviation is change from 1.29to 1.33. Moreover, Pearson correlation explain the relationship between Independent and independent variable initially. Results of the study shows that manufacturing performance has a significant and positive correlation with petroleum price in strategies (P-value <0.05). In addition to eat manufacturing performance also positively associated with electricity rising strategy (P-value <0.05). However, correlation between electricity pricing strategy and manufacturing performance is greater than that of petroleum prices strategy. Initial findings of the Pearson correlation support our both hypotheses. Correlation between manufacturing performance and electricity prices strategy is 42.2% and for petroleum pricing strategy is 19.9%.

Table II

| Variable | Mean | Std. Deviation | PPS | EPS | MP |
|----------|------|----------------|-----|-----|-----|
| Petroleum Prices Strategy | 2.8900 | 1.33926 | 1 | | |
| Electricity Prices Strategy | 3.0167 | 1.40815 | 0.062 | 1 | |
| Manufacturing Performance | 2.8900 | 1.29213 | .199$^*$ | .422$^{**}$ | 1 |

## Convergent Validity

If the correlation is presented among the construct than the convergent validity is predictable which also explains the degree of agreement and further explores the results of defined construct.To measure the convergent validity the criteria is applied. The first criteria is that the loading value of every item needs to be greater than 0.7. Hair et al., (2014), stated that the value of the Cronbach alpha is equal to or it is greater than 0.7 which is considered to be satisfactory for the contrast reliability. However, the average variance extract needs to be more than 0.5 or it can be equal to 0.5. The value of composite reliabilityable 4.2. Reveals that the value which were measuring the convergent validity. From the above table it is clearly illustrated that the values of each loading were greater than 0.7. This shows that the all values of the Cronbach's Alpha were more than 0.7 which isone of the good signs in the acceptance criteria. The composite reliability of all of thevalues of average variances and the extract was more than 0.7 which means that the scales that were used for manufacturing performance, electricity pricing strategy and petroleum pricing strategy were having the convergent validity.

Table III explain the convergent validity of all variables. Outer loading basically explain the variance by each item for a specific variable. A valid criteria for variance of each item is more than 70%. Hence, from the result it is indicated that convergent validity of electricity pricing strategy, manufacturing performance and petroleum pricing strategy meeting the criteria of 70%. Moreover,convergent validity also captured by the average variance extracted (AVE) for each variable that must be more than 50%. AVE of all variables is greater than 50% (Table V).

Table III

| Items | Electricity Prices Strategy | Manufacturing Performance | Petroleum Prices Strategy |
|-------|------------------------------|----------------------------|----------------------------|
| EPS1 | 0.956 | | |
| EPS2 | 0.911 | | |
| EPS3 | 0.946 | | |
| MP1 | | 0.910 | |
| MP2 | | 0.871 | |
| MP3 | | 0.871 | |
| MP4 | | 0.883 | |
| PPS1 | | | 0.919 |
| PPS2 | | | 0.943 |
| PPS3 | | | 0.901 |

## Discriminate Validity

The discriminant validity refers to the degree of the differences between the construct within the model. This is measured by the three type of tests. Henseler et al. (2015), stated that the diagonal values need to be greater than the non-diagonal value. The second criteria which is applied to

measure the discernment validity is the cross loading which is confirmed with each item. It shows that either each item are having the highest value of one construct or not. It also ensures that the cross loading are more than 0.5 or not. The value of Hetrotrait-Monotrait (HTMT) needs to be less than 0.8. Fornell and Larcker Construct was more than 0.7 which further fills the measurement criteria respective to theneeds to be more than or equal to 0.7. Table IV shows that all the diagonal values were greater than the non-diagonal values which fulfills the discriminate validity criteria of Fornell & Larcker (1981).

Table IV

| Variables | EPS | MP | PPS |
|---|---|---|---|
| Electricity Prices Strategy | 0.938 | | |
| Manufacturing Performance | 0.425 | 0.884 | |
| Petroleum Prices Strategy | 0.071 | 0.209 | 0.921 |

**Reliability**

Reliability describes the internal consistency of the instrument used for the collection of the data. Reliability also explain the inter-item correction within all variables. Inter-item correlaion of the question is estimated by the Cronbach's Alpha that must be greater than 70%. In addition liability also explain the internal consistently of the questionnaire items which indicates, all questions of the variables compositly explain it. Avalid criteria for composite reliability is 70%. Results of composite reliability and Cronbach's Alphaindicating that inter-item correlation and internal consistency of items is higher than 70%.

Table V

| Variable | Cronbach's Alpha | Composite Reliability | Average Variance Extracted |
|---|---|---|---|
| EPS | 0.931 | 0.956 | 0.879 |
| MP | 0.907 | 0.935 | 0.781 |
| PPS | 0.914 | 0.944 | 0.849 |

**Path coefficient**

Table VII shows R-square value for the variable. The Q square value defines the predictive relevance of research model and the value that is greater than zero shows the higher predictive relevance. It also shows the R Square Hair et al. (2011), stated that 0.75, 0.5 or 0.25 value of R Square interpreted as substantial, moderate or weak relation of dependent variable. The findings show that the coefficient value of independent variable that is electricity pricing strategy was 41.2% and petroleum pricing strategywas 18.0% which shows substantial relationship with manufacturing performance.

From the table VI the findings about hypothesis are revealed. The p value which is less than 0.05 are more likely to lie in the region of significance. The P-value of petroleum pricing strategy

were less than 0.05 which shows that there is significant impact of electricity pricing strategy. However, petroleum pricing strategy is significant at 10% confidence interval. However, the value of beta coefficient forelectricity pricing strategy greater then petroleum pricing strategywhich shows that higher impact on manufacturing performance.

Table VI

| Hypotheses | Original Sample | Sample Mean | Standard Deviation | T Statistics | P Values |
|---|---|---|---|---|---|
| Electricity Prices Strategy -> Manufacturing Performance | 0.412 | 0.425 | 0.098 | 4.226 | 0.000 |
| Petroleum Prices Strategy -> Manufacturing Performance | 0.180 | 0.189 | 0.095 | 1.886 | 0.060 |

Table VII

| Dependent variable | R Square | R Square Adjusted |
|---|---|---|
| Manufacturing Performance | 0.213 | 0.197 |

**Conclusion, Discussion and Recommendations**

**Discussion & Conclusion**

Current research explains the impact of electricity pricing strategy and petroleum pricing strategy on the manufacturing performance of the textile industry in the Pakistan. For this purpose, currently study use the cross-sectional data obtained from the professionals working in textile industry specifically in the Karachi city. Survey from 100 respondent was collected to achieve the objectives of the study.

Findings of the research indicating that both petroleum pricing Strategies and electricity pricing strategies significantly influence to the manufacturing performance of textile sector in Pakistan. Hence, a sustainable and consistent pricing strategy provide a smooth manufacturing performance in textile sector. However, pricing of energy products such as electricity and petroleum continuously change because of the economic conditions and situation of international petroleum market. Petroleum and electricity prices also determines the cost of production incurred in the textile products and services. A stable cost of production unable the firm to determine the price of product and services that is offered to final customer. Change in energy prices ultimately influence on the manufacturing performance through cost of production which impact on the final consumer. Furthermore current findings suggested that improvement in pricing strategies of Petroleum and electricity improve the manufacturing performance.

## Implications

Findings of the research provide a significant suggestions to the policy makers and the managers of the textile sector. High volatility in the pricing of electricity and petroleum disturb the manufacturing performance of textile sector. Policy maker must create the flexibility in the energy consumption and develop substitute resources of petroleum and electricity, so that manufacturing performance of textile products will be enhance in the future. Pakistan economy is still facing energy crisis. Textile sector in the Pakistan must deploy the capital and machinery which should be energy efficient. Furthermore, due to change in oil prices, electricity demand and consumption also influence in the manufacturing sector. Both electricity and petroleum prices are Interlink with each other. For this purpose textile sector management develop their own energy resources.

## Limitations and Recommendations

Current research has inherent limitations specifically which is based on the selection of cross sectional Research Design. Current study limited to textile sector working in Pakistan. Behavior of pricing strategy over the specific time unable to analyze completely, which restrict application of findings in the panel data. Future researches can be conducted in context of other countries like Malaysia, China and India. Researches can be incorporate other variables in the manufacturing performance such as Technological innovation, quality of raw material and change the nature of industry in terms of chemical sector, cement sector and steel production.

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**Survey Questionnaire**

Please tick ( √ ) the most appropriate answer.

Gender:
   a) Male ☐   b) Female ☐

Age:
a) 18-25 ☐   b) 26-30 ☐   c) 31-35 ☐   d)   36 or above ☐

Education:
a) Under Graduate ☐   b) Graduate ☐   c) Post Graduate ☐   d) Others ☐

Please tick ( √ ) the most appropriate answer.
   1= Strongly Disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly Agree

| S. No | Variables & Items | 1 S.D.A | 2 D.A | 3 N.S | 4 A | 5 S.A |
|---|---|---|---|---|---|---|
| **A** | **Manufacturing/operational Performance:** | | | | | |
| 1. | Our company deliver Quickly as compare to competitors | | | | | |
| 2. | Unit cost of Our company product less relative to competitors | | | | | |
| 3. | Overall productivity of our company is satisfactory | | | | | |
| 4. | Overall customer satisfactions of products is | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | according to market | | | | | |
| **B** | **Petroleum pricing Strategy :** | | | | | |
| 7. | The Petroleum price offering by this supplier is reasonable | | | | | |
| 8. | The delivery fees of Petroleum are flexible and reasonable | | | | | |
| 9. | There is clear information for fees/charges Petroleum | | | | | |
| **C** | **Electricity pricing Strategy :** | | | | | |
| 11. | The electricity price offering by this supplier is reasonable | | | | | |
| 12. | The delivery fees of electricity are flexible and reasonable | | | | | |
| 13. | There is clear information for fees/charges electricity | | | | | |