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# Fertilizer Sectors Pulls the Strings at Bourse Since 2001 To 2010

### By Yasir Hassan, Saleha, Syed zeeshan haider & Naveed Latif

University of Lahore, Pakistan

Abstract - The purpose of this study is to see how much fertilizer sector is contributing in the economy of Pakistan, here we see some particulars performance i.e. sale, assets, equity, paid up capital, cash dividend, stock dividend etc. we have taken the data from 2001 to 2010 and run regression analysis and generate different results which we will discuss later. if only the government policies, technology improve then the sector could give its total output, which thus contribute to the economy of the Pakistan which will be benefited for all of us.

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## Fertilizer Sectors Pulls the Strings at Bourse Since 2001 To 2010

Yasir Hassan<sup>a</sup>, Saleha<sup>o</sup>, Syed zeeshan haider <sup>p</sup> & Naveed Latif <sup>p</sup>

Abstact - The purpose of this study is to see how much fertilizer sector is contributing in the economy of Pakistan, here we see some particulars performance i.e. sale, assets, equity, paid up capital, cash dividend, stock dividend etc. we have taken the data from 2001 to 2010 and run regression analysis and generate different results which we will discuss later. if only the government policies, technology improve then the sector could give its total output, which thus contribute to the economy of the Pakistan which will be benefited for all of us.

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#### I. INTRODUCTION

ertilizers in Pakistan are playing an important role in the economy of Pakistan. They are contributing from 30 to 60 percent in different crop production regions of the country. If we talk about the consumption pattern then Pakistan stand at the no in the world, but if we see the growth of the sector then we come to know that the sector is not improving so much.

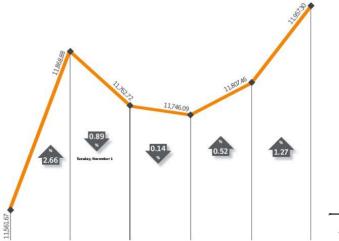
There are basically two main types of fertilizers

- Organic
- Inorganic

Organic fertilizers are bone meal, fishmeal, blood; etc. Inorganic manure is Nitrogen, potassium or any other chemical necessary in the need of plant growth.

Fertilizers are used to improve the quality as well as quantity of food, growth, production of the crop. Domestic production is marketed mainly by producers themselves, while imports are marketed most fertilizers are labeled garden fertilizer, lawn fertilizer, flower fertilizer, etc. time is best hope to improve per hectare yield if irrigation water and certified seeds are provided according to need and weather conditions are favorable so in Pakistan fertilizer sector is like a back bone of economy.

#### II. LITERATURE REVIEW OF FERTILIZER SECTOR





The imports of fertilize registered a negative grant of 25.5% amounting US\$167.6 million as compared to US\$265.1 million in financial year 1999

Author a: Lecturer: Lahore Business School, the University of Lahore,

Pakistan. E-mail : Yasir.uol@hotmail.com

Author : Lecturer: Department of Pharmacy, the University of Lahore,

Pakistan.

Author ? : Students: Lahore Business School, the University of Lahore,

Pakistan.

#### (ECONOMIC SURVEY REPORT 1999).

(The GM Finance, Fauji Fertilizer Company Ltd., Liaquat JavedMian), said that the fertilizers are meeting the company requirements up to mark but if we see the consumptions pattern according to the world and Pakistan production then it is so much low, this point is according to the export point of view.

(The Manager Marketing Services, Engro Chemical Pakistan Ltd)according to him the fertilizers are important part of the feed and other components, and the production of the fertilizers is up to mark but they should improve the production to meet the universal requirements. Our country's food requirement was 17 million tons in the year 2000, which would reach to 25 million tones till 2020.

(Zaffar A. Khan, President Engro Chemical), spoke on "Certain perceptions about the fertilizer industry". According to him the fertilizers are not sincere with the environment this is because they are charging high prices, low quality and thus not satisfying the customers. So if we want to flourish the sector then we should implement the strict policies so that their sincerity could be true.

(Dr. Binyamin Khalid, the Technical Services Advisor, Engro Chemical Pakistan Ltd). Said the use of fertilizer is not poisonous. It has helped a lot to the economic development of the country and help Pak. He said that the use of fertilizer has increased the production from 8 mounds to 29 mounts per acre from last few years

The imports of fertilize registered a negative grant of 25.5% amounting US\$167.6 million as compared to US\$265.1 million in financial year 1999. The private sector should be encouraged to flourish,

appropriate steps should be taken for privatizing fertilizer factories, maximum incentives for fertilizer factories should be provided and efficient, experienced and trained persons should be encouraged and they may be provided with direct and indirect fringe benefits. (COPYRIGHT 2002 Economic and Industrial Publications)

Seasonal deliveries are split between Kharif and Rabi seasons. In Sharif 2002 deliveries amounted to 1 384 thousand tons of nutrients and in Rabi 2002/03 to 1 634 thousand tons of nutrients. On a three year basis the share of urea was 65.8 percent, DAP 18.0 percent, NP compounds 5.5 percent, CAN 5.7 percent and 5 percent of various other fertilizers November, December and January are the main

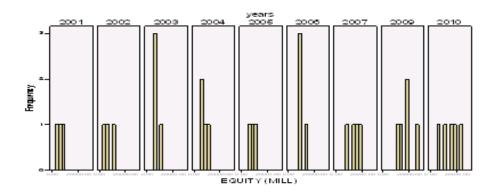
(Mian, A. & Javed, Y. 2005. The soil resources of Pakistan - their potential, present stage and strategies for conservation. Sector paper for National Strategy. 53 pp. Islamabad.)

#### III. METHODOLOGY

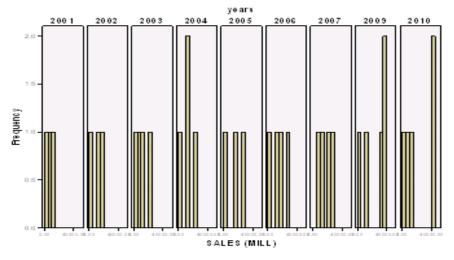
In this study one way ANOVAs test as well as others test are used, it is used to comparing the means from 2001 to 2010.multiple as well as regression model is used to known that the differentiate between variables which may be dependent or independent. Like sales paid of capital and others describe graphs also explain the fertilizers sectors ups and down in economy in ten years like area and line chart. We have also find out standard devotion mean and then coefficient of variance per year.etc.

First we will see how the different particuars are changig will the passage of time, so we will discuss the graphs first.

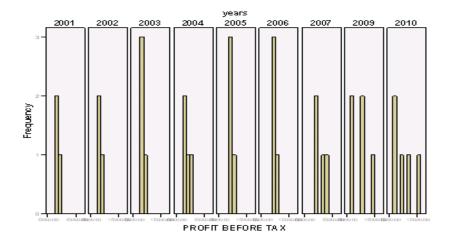
#### Graphs:



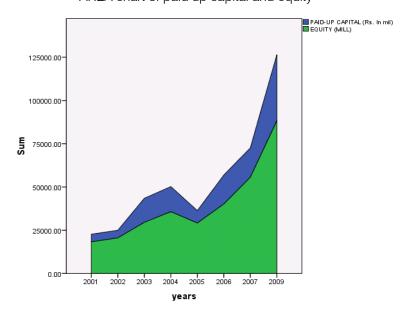
As from the table we see that the equity is more in 2003 and 2006 as compare to others yearsin others it remain almost constant.



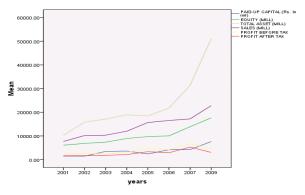
2009 and 2004 was the best year for sales as compare to others years this shows that sales were maximum in 2009 and 2010 and in others years it keep on constant. In other words sale mostly remain slowly growing



Profit before tax wasmaximum in 2005 and 2003 while it keeps on changes as to time as well. So profit keeps on increasing as well. While in 2007 and 2006 it was low and decline as well AREA chart of paid up capital and equity



This graph shows that paid of capital is increasing slightly from first and then decline and star growing up while equity keep on growing year by year., paid of capital and equity have almost the same effect.



This chart tell us that in 2001 total assets of fertizers sectors were small but in 2010 it was much high sales also to some extent increase randomly while profit after tax was keep on decreasing equity was almost the same slowly increased.

Now here we will show you the standard deviation, mean, variance and covariance of the different particulars.

**Descriptive Statistics** 

	Mean	Std. Deviation	N
Sales (Mill)	19410.9798	13971.48388	21
Paid-Up Capital (Rs. In Mil)	5865.4601	5394.57397	21
Face Value	10.0000	.00000	21
No. Of Share	586.5460	539.45740	21
Equity (Mill)	13882.9775	5560.99047	21
Total Asset (Mill)	34418.0971	19129.49404	21
(Bank) / Financial Charges	685.6410	424.79154	21
Profit Before Tax	5198.9756	4521.12528	21
Taxation	1532.2805	1396.89801	21
Profit After Tax	3666.6951	3315.05367	21
Cash Dividend	64.8571	42.90808	21
Stock Dividend	20.4762	64.94045	21
Codes = 5 (Filter)	85.33	77.418	21

Equity assets was more high as compare to others while face value was low with stock and cash dividend Variables

VARIABLES	year	Mean	SD	CV
Paid up capital	2001	1,522.672	1,045.083	68.683
	2002	1,042.288	1,045.083	1.0026816
	2003	2,810.263	4,621.534	164.4520
	2004	2,852.953	4,519.400	158.411

	2005	3,006.467	3,923.878	130.514
	2006	2,941.210	3,999.039	135.965
	2007	2,878.122	3,805.872	132.234
	2008	2,788.322	3,717.062	133.3082
	2009	5,816.960	6,624.333	1138.879
	2010	5,375.799	6,931.655	128.9418
equity	2001	1522.672	3073.386	201.841
	2002	1478.569	6478.603	438.167
	2003	3478.487	6860.833	197.236
	2004	3635.195	2552.716	7.0344
	2005	4131.455	5105.432	123.574
	2006	4196.711	7088.682	168.91
	2007	4259.799	380.587	8.9343
	2008	4349.600	752.293	17.295
	2009	7639.926	662.433	8.6706
	2010	8792.855	700.920	7.97147
Sales	2001	7684.414	4589.385381	59.7232
	2002	9,798.310	7016.926848	716.136
	2003	10,339.381	8136.745706	78.696
	2004	12,616.747	5667.251809	44.9184
	2005			

		15,682.648	11320.36095	72.1839
	2006	16,535.423	4494.205746	27.1792
	2009	51524.508	25949.2356	50.3628
	2010	39038.355	8121.87912	46.42047
	2001	2,335.884	2309.1124	.98
Profit	2002	1,483.512	1969.288503	1.32
	2003	2501.230	1698.992309	.67
Before Tax	2004	3088.207	2082.329337	0.67
	2005	4479.193	1845.394945	0.41
	2006	6641.863	1925.027801	2.94
	2007	654.446	1925.027801	2.95
	2009	943.512	254.8533596	0.27
	2010	870.248	576.4523989	0.02

Sales shows variable effect as its minimum CV was 50.3 so this means that it is rapid ally increase then decrease as well. Paid of capital and equity remain almost increasing par year, mean of profit before tax is showing variation. In the year 2008 its sales were not even to the break point so it was consider as zero.

#### **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994ª	.987	.984	351.28871

Predictors: (Constant), Stock Dividend, Total Asset (Mill), Cash Dividend, Taxation, (Bank) / Financial Charges, Paid-Up Capital (Rs. In Mil), Profit Before Tax, Sales (Mill), Equity (Mill)

#### Explanation power of the model:

If we see the explanation power of the model then we come to know that the model explanation power is almost "99%" which depicts that all the variables are explaining the model very well and also the data is real time data.

#### Hypothesis:

 $H_0$ : The model is not significant  $H_1$ : The model is significant

#### ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.900E8	9	3.222E7	261.0 95	.000ª
Residual		3702112.717	30	123403.757		
	Total	2.937E8	39			

- a. Predictors: (Constant), Stock Dividend, Total Asset (Mill), Cash Dividend, Taxation, (Bank) / Financial Charges, Paid-Up Capital (Rs. In Mil), Profit Before Tax , Sales (Mill) , Equity (Mill)
- b. Dependent Variable: Profit After Tax

If we see the significance value of the model we come to know that the significance value of the model is 0.00 which depicts that the model is significant. So we reject H0 and accept H1.

#### Coefficients

	Unstandardized Coefficients		Standardized Coefficients				
Model	В	Std. Error	Beta	t	Sig.		
1 (Constant)	469.281	219.979		2.133	.041		
PAID-UP CAPITAL (Rs. In mil)	055	.022	092	-2.461	.020		
EQUITY (MILL)	004	.026	009	146	.885		
TOTAL ASSET (MILL)	.009	.010	.064	.924	.363		
SALES (MILL)	031	.012	141	-2.583	.015		
(BANK) / FINANCIAL CHARGES	031	.263	005	119	.906		
PROFIT BEFORE TAX	.828	.029	1.151	28.101	.000		
TAXATION	070	.071	036	979	.335		
CASH DIVIDEND	-5.586	2.466	086	-2.266	.031		
STOCK DIVIDEND	832	1.397	015	595	.556		

a. Dependent Variable: Profit After Tax

#### Now here is a regression model:

PAT 0.055(paid =469.979\_ up capital) 0.004(equity) +0.009(total assets) -0.031(sales) 0.031(bank charges) +0.828(PBT)-0.70(tax)5.586(cash dividend) -0.832(stock dividend) So the above model shows that by changing the 1 unit

in paid in capital, equity, total assets, sales, bank charges, PBT, tax, cash dividend, stock, total dividend and no of shares respectively the PAT decrease by -.055, -.004,-0.31,-0.31,-0.70,-5.586, -0.832 increase by 0.09 and 0.828 respectively

Acceptance and non-acceptance of the model particulars:

Here we will see the significance value then we come to know that which particular we should include and which should not.

Here we see that the sales, PBT, Paid up capital and cash dividend significance is lower than the 5% so we concluded that these particulars should be included in the model and should reject all the other particulars which have higher significance value i.e. equity, assets, financial charges, tax stock dividend will not be included in the model.

#### IV. Conclusion

From the above results we concluded that the fertilizer industry is growing with some normal pace in our country, this is because of the government policies, less latest technology, not operating their operations very well. Profitability is contributing less to the economy; the production is up to the mark but should be improved also the inefficiency of the management impacts on the prices of the fertilizers which at the end effects the consumers.

But if we see the opportunities then we realize that if only the government policies, technology improve then the sector could give its total output, which thus contribute to the economy of the Pakistan which will be benefited for all of us.

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