Memorandum

To: Pelican Stores Management

From: Ashley N. Earl

Date: September 10, 2007

Re: July Coupon Promotion Results – Specific Descriptive Statistics

Coupon Promotion Results

As a follow up to my previous memorandum, I have prepared specific descriptive statistics regarding the results of the previous coupon promotion period throughout the month of July.

These descriptive statistics such as the relationship between net sales and descriptive statistics on net sales by various classifications of customers, as well as the descriptive statistics concerning the relationship between age and net sales can help us further understand our target audience and ultimately boost total sales for Pelican Department Stores. By identifying our mean, median and mode regarding each variable (marital status, type of customer, gender and age), we can further understand the relationships between our variables.

Descriptive Statistics on Net Sales:

Net Sales (All Customers)	
Mean	$77.60
Median	$59.71
Mode	$31.60
Range	274.36
Standard Deviation	55.66
Coefficient of Variation	71.73

Descriptive Statistics on Net Sales by Various Classifications of Customers:

Net Sales by Customer Type						
	Married	**Single**	**Regular**	**Promotion**	**Male**	**Female**
Mean	$78.03	$75.35	$61.99	$84.29	$56.49	$79.19
Median	$59.00	$64.46	$51.00	$63.42	$47.20	$62.40
Mode	$39.50	$31.60	$44.50	$31.60	$39.50	$31.60
Range	274.36	163.30	137.25	274.36	89.30	274.36
Standard Deviation	57.67	45.17	35.07	61.46	30.40	56.90
Coefficient of Variation	73.91	59.95	56.57	72.91	53.82	71.85

Descriptive Statistics concerning the relationship between Age and Net Sales:

Net Sales by Age of Customer
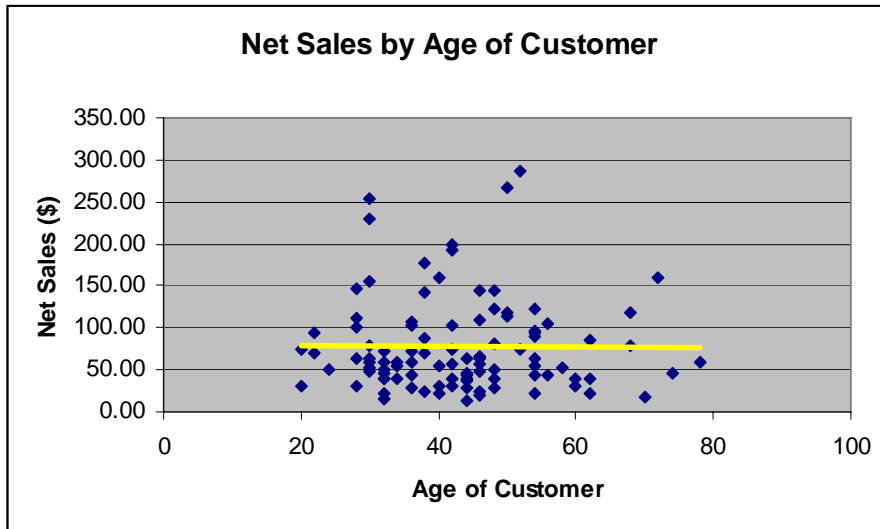
Age		Net Sales	
Mean	43.08	Mean	77.60
Standard Error	1.24	Standard Error	5.57
Median	42.00	Median	59.71
Mode	46.00	Mode	31.60
Standard Deviation	12.39	Standard Deviation	55.66
Sample Variance	153.49	Sample Variance	3098.59
Kurtosis	0.07	Kurtosis	3.15
Skewness	0.52	Skewness	1.71
Range	58.00	Range	274.36
Minimum	20.00	Minimum	13.23
Maximum	78.00	Maximum	287.59
Sum	4308.00	Sum	7760.05
Count	100.00	Count	100.00

Sample Correlation between Age and Net Sales:

	Age	Net Sales
Age	1	
Net Sales	-0.0106359	1

Sample Correlation between Items Sold and Net Sales:
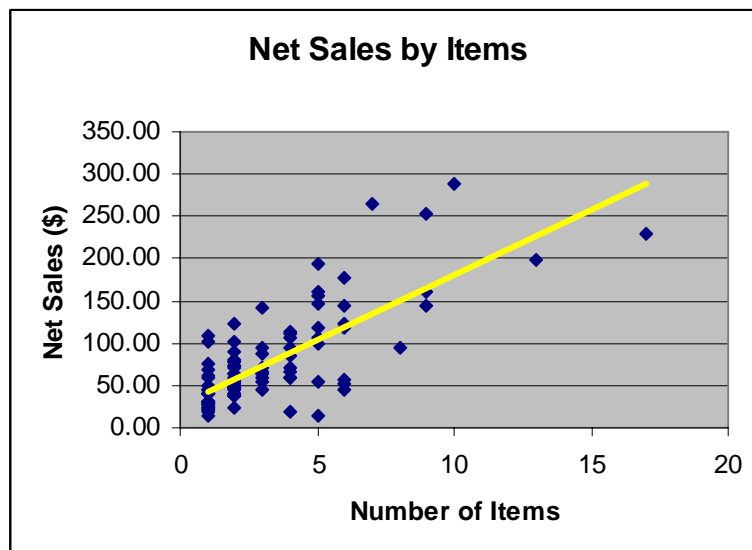
Correlation Coefficient: 0.755059

Noted Observations:

❖ First of all, the promotion customers had a mean of $84.29 and the regular customers had a mean of $61.99. There is a difference of $22.30 between the average Net Sales of the two types of customers. The promotion customers had a discount coupon and this clearly had some sort of encouragement towards spending more money at Pelican Stores. The promotion coupons were a great benefit to the company when we take into consideration that there were many more promotion customers than regular and the promotion customers spent much more on average than the regular customers.

❖ The correlation coefficient between Age and Net Sales is -0.0106359. This clearly shows that there is neither a positive or negative correlation between the two variables. Therefore, all ages of audience should be targeted; there is no one particular audience regarding age that spent more money than the other. One audience in particular that we should target would be women. It seems that women tend to spend much more money at Pelican Stores than men.

❖ The correlation coefficient between Items sold and Net Sales is 0.755059. This indicates a positive correlation between items sold and net sales; it also shows that the more items that were purchased, the more net sales per customer. Perhaps it would be beneficial to create an appeal towards buying more items; for example: 20% off the purchase of three or more items, 30% off the purchase of four of more items, etc.