

Thanksgiving Dinner For A Family of Four  
Using SPSS-Dependent t Test

**Introduction**

As Thanksgiving approaches, this researcher collected data to determine if one grocery establishment was significantly less expensive than its competitor. To ensure internal and external validity, a list was compiled of items using name brands that were easily accessible in both locations. The stores were also accessed within the same neighborhood directly across the street from each other in a local shopping center. The hypotheses were developed by the researcher to identify the null hypothesis as no difference between the two markets and the alternative as there being an existing significant difference. The level of significance was set at .05.

**Methods:**

The data was collected by the researcher by visiting each grocery store and recording the price of each item need for the dinner preparation. The data was recorded in table form and then entered into SPSS for analysis.

**Results:**

Because the data were logically paired, a dependent t-test was performed. The mean difference between the food items at Publix and Kroger is .129, which was not statistically significant ( $t_{05,15} = .762, p = .458$ ). Based on SPSS results,  $r = .959$  which indicates there is a significant positive relationship between the two grocery stores regarding the cost of the food items needed for Thanksgiving dinner.

**Conclusion:**

The researcher failed to reject the null hypothesis at the .05 level of significance. The choice of grocery store for purchasing foods needed for Thanksgiving dinner does not make a difference in the cost of food for the holiday meal. The 16 food items to be purchased totaled \$45.76 and \$43.70 with a difference of \$2.06 in favor of Kroger. The mean scores of 2.86(SD = 2.39) and 2.73(SD = 2.34) indicate the difference of cost of the foods items for a Thanksgiving dinner from the two stores is not significant. One-sample t test data results are included as well to display the amount of difference between the cost of food from each of the grocery stores and confirm the exact same result as the dependent t test

**Consumer Alert !!!**

Each grocery store sells a store brand of many products. Kroger markets a store brand for every item purchased which would substantially increase the difference in cost between the two stores. Publix has fewer products that were included in this study with the store brand label.

Thanksgiving Dinner For Four

Food Item	Publix	Kroger	Difference
Turkey	10.54	10.54	0.
Cranberry Sauce	1.45	1.25	.20
Stuffing	2.25	2.50	-.25
Frozen French-cut Green Beans	1.25	1.00	.25
Cream of Mushroom soup	1.49	1.49	0.
Fried Onion Rings	1.99	2.05	-.06
5 lb. potatoes	2.99	2.99	0.
Frozen Corn	1.50	2.00	-.50
Sweet Potatoes	2.86	2.86	0.
Marshmallows	1.39	1.00	.39
Frozen Dinner Rolls	2.69	2.50	.19
Turkey Gravy	.99	1.00	-.01
Apple Pie	4.99	3.14	1.85
Cool Whip	1.39	1.00	.39
Pumpkin Pie	3.00	4.39	-1.39
Ice Cream	4.99	3.99	1.00
Total Cost	45.76	43.70	2.06

All products are name brands in an appropriate size for a family of four. Drinks and staples (butter, milk, brown sugar) are not included.

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Publix	2.8600	16	2.38574	.59643
	Kroger	2.7313	16	2.34368	.58592

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Publix & Kroger	16	.959	.000

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Publix - Kroger	.12875	.67569	.16892	-.23130	.48880	.762	15	.458

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
difference	16	.1288	.67569	.16892

**One-Sample Test**

		Test Value = 0				
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
difference	.762	15	.458	.12875	-.2313	.4888