

Legal Advertising – Does It Pay?

- When calculating the correlation between the number of new personal injury cases and the number of new worker's compensation cases, we can see that there is a very small correlation .086. This does not indicate a significant advantage to partner A (p -value = .560). When the correlation is computed for each individual partner versus the advertising expenditures, there is a significant correlation for partner A (p -value = .000) but not for partner B (p -value = .725). Rationale: The larger p -value means that the correlation is statically indistinguishable from zero.

Pearson correlation of y1-pa-NewPI and y2-pb-NewWC = 0.086
P-Value = 0.560

Pearson correlation of AdvExp6 and y1-pa-NewPI = 0.539
P-Value = 0.000

Pearson correlation of AdvExp6 and y2-pb-NewWC = 0.560
P-Value = 0.725

- The standard deviations for the two partners are presented below (highlighted in the regression analysis). Note that partner A has nearly the same standard deviation (9.67521) as partner B (9.62296). If partner A were to present only these standard deviations, without the corresponding p -values, it might suggest that advertising produced similar effects in WC and PI cases. However, the prediction equation for partner A is significantly useful for predicting new PI cases:
 $H_0: \beta_1 = 0$
 $H_a: \beta_1 \neq 0$; p -value = .000 < $\alpha = .05$. However, partner B's model is not significant in predicting new WC cases; p -value = .725 > $\alpha = .05$.

The regression equation is NewPI = 7.77 + 0.113AdvExp6

Predictor	Coef	SE Coef	T	P
Constant	7.767	3.385	2.29	0.027
AdvExp6	0.11289	0.02793	4.04	0.000

S = 9.67521 R-Sq = 29.0% R-Sq(adj) = 27.2%

The regression equation is NewWC = 24.6 + 0.0098AdvExp6

Predictor	Coef	SE Coef	T	P
Constant	24.574	3.367	7.30	0.000
AdvExp6	0.00982	0.02778	0.35	0.725

S = 9.62296 R-Sq = 0.3% R-Sq(adj) = 0.0%

- The standard deviations for the number of new personal injury cases and the standard deviation for the number of new worker's compensation cases are presented below:

Variable	Total			
	Count	Mean	SE Mean	StDev
y1-pa-NewPI	48	19.15	1.61	11.12
y2-pb-NewWC	48	25.29	1.33	9.20

Even though partner B has a smaller standard deviation when only looking at the number of cases individually, this does not take into account the variability of the different complexity of each law situation (personal injury versus worker's compensation). Partner A would not benefit from reporting this data without looking at the complete analysis presented above since his/her standard deviation is larger. In fact, the standard deviation for partner A is reduced in the linear regression model, while the standard deviation for partner B is nearly the same with or without the linear regression model.

CS1-2 Legal Advertising – Does It Pay?

Rationale: this suggests that the variability of the predicted number of new WC cases is not affected by a model of linear regression on advertising revenues, which further supports partner B's argument.