USING TIME SERIES ANALYSIS TO SHOW TRADEMARK INFRINGEMENT

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In trademark litigation, the Lanham Act provides for the recovery of defendant's profits, or plaintiff's damages, including any lost profits. This often leads to analysis if the defendant company benefitted from the use of the allegedly infringed trademark, and the amount of that benefit. One statistical tool we have sometimes used in trademark cases to determine probable trademark benefit to the defendant is a time series regression model. Regression models have been used in many types of civil litigation in recent decades. A good summary of its use in several types of cases is presented in "Statistics and the Law."[1]   A shorter article that deals with regression models and general business losses is "Computing Losses in Business Interruption Cases," by Robert Trout and Carroll Foster.[2]

In the case of trademark infringement litigation time series regression models can be helpful to ascertaining the benefit achieved by the defendant, as well the impact on the plaintiff, and the effect of any confusion in the marketplace on plaintiff's sales. Below I present two examples where I used a time series model to analyze claims in trademark cases.

The first example was in the defense of a diversified beverage producer. The company was sued and plaintiff alleged that defendant infringed its trademark related to a single beverage of defendant's total beverage products. Exhibit 1, below, compares the target beverage sales with defendant's total beverage sales, over a time period that extended before the alleged infringement to a period after it. The graph indicates that defendant's target beverage sales did not appreciably change after the alleged infringement, compared with its sales prior to that date. A statistical regression model indicated that monthly sales did not change after the event date. The indicator variable used to capture the effect of sales after the event date was statistically not significant, and the coefficient of the variable showed a relative decline after the event date, supporting defendant's claims that the alleged infringement, even if true, did not account for any increase in target beverage's monthly sales.

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[1] Edited by Morris H. DeGroot, Stephen E. Fienberg and Joseph B. Kadane. Wiley Publishing (New York) 1986.

[2] Journal of Forensic Economics, Vol 3, No. 1, December 1989, pp. 9-22.

Exhibit 1
Monthly Total Beverage Sales and
Target Beverage Sales
Jan 2007 - Dec 2011
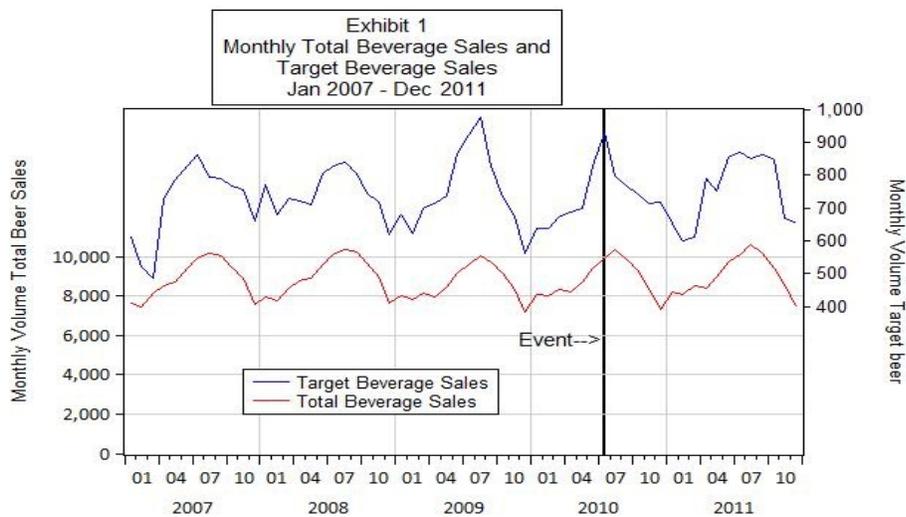
The second example is a situation where plaintiff produced and sold a certain trademarked food product. Plaintiff asserted that defendant infringed its trademark for an identical food product and benefitted from its infringement. I performed a time series analysis of defendant's allegedly infringing product covering a period before the event and after the event. Exhibit 2, below, shows defendant's sales and it is clear from the graph that sales, which are already increasing over time, get an additional boost at the time of the claimed infringement. The time series regression model indicated that sales increased by about $200,000 per month after the event, even considering the upward sloping sales trend line. The estimated monthly change was statistically significant at a high level of reliability.

Exhibit 2
Food Product Sales
Jan 2008 - Mar 2013
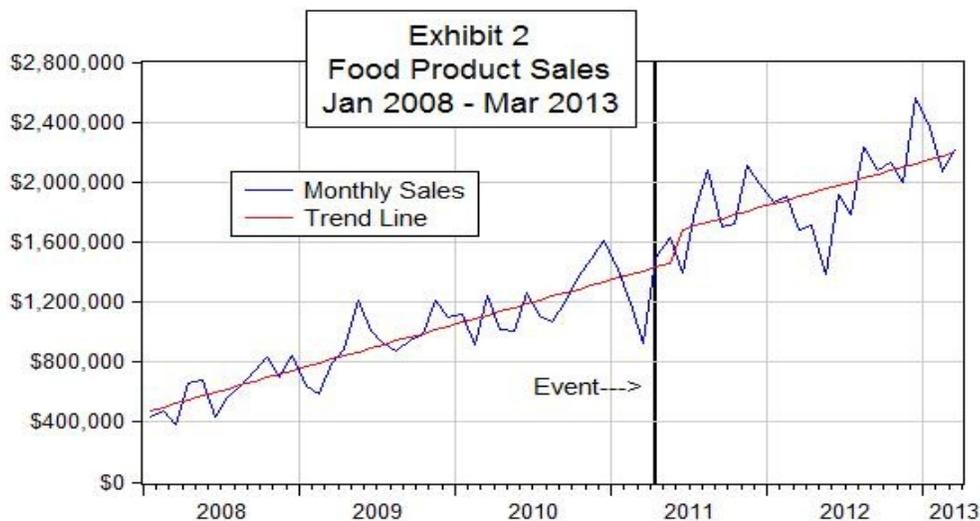
While these two examples focused on defendant's sales, the procedure can also be applied to plaintiff's sales, to determine the impact on sales due to the alleged infringement, and provide some evidence (or lack thereof) of confusion in the marketplace. In addition, one could use the same technique to measure the effect on a plaintiff in a patent infringement case where there are multiple providers in a product market and plaintiff cannot assume all of defendant's sales would be its sales.

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