

The Apple vs. Samsung “Patent Trial of the Century,” Conjoint Analysis, and Sawtooth Software

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Trial of the Century?

No, we’re not referring to OJ and gloves that won’t fit. We’re talking conjoint analysis, Sawtooth Software, and our book “Getting Started with Conjoint” all factoring into the courtroom arguments in Apple’s \$2.5 billion suit against Samsung that many are calling the Patent Trial of the Century. The subject of this lawsuit between the world’s two largest smartphone manufacturers was Apple’s claim that Samsung stole patented ideas (such as hardware designs and iOS’s “bounce-back”, tap-to-zoom, and two finger gestures) and incorporated them into its devices. After 50 hours of often mind-numbing courtroom arguments, a nine-person jury of Bay Area citizens unfamiliar with intellectual property law was asked to decide this complex case involving patents and technology innovation. Three days later, the jury awarded a little over \$1 billion to Apple, saying that Samsung had infringed on some of its patents. There are certain to be appeals.

The Expert Witness

To prepare for the courtroom battle, Apple commissioned two online conjoint analysis studies (one to study preferences for smartphones and one for tablets) to help quantify the damages. The iPhone developer hired John Hauser, a marketing professor at MIT, to oversee the research. Hauser, who has spoken at previous Sawtooth Software conferences, used our conjoint software tools to conduct the research and then took the stand in the San Jose courtroom as one of Apple’s expert witnesses.

Hauser was unable to reveal much at all about the case due to nondisclosure agreements, but interestingly enough a wealth of information is publically available that details the software and methodologies he used. According to public information, Hauser worked together with AMS (Applied Marketing Science) to conduct a series of in-person qualitative interviews with consumers. Based on the issues and terminology revealed in those interviews, Hauser and AMS designed the CBC surveys using our SSI Web (CBC) software; then analyzed the choice data using CBC/HB v5 and our market simulator with Randomized First Choice. In his written expert testimony he stated that he “...used Sawtooth Software’s SSI Web Version 7.0.26 package, which is a well-known and widely used software system for these types of applications.” Both studies included 16 CBC tasks and employed graphical—in some cases multi-media representations— for the 7 attributes.

What-If Simulations, What Did Samsung Gain?

Hauser was one of a team of experts whose testimony was relied upon to justify the \$2.5 billion damage claim, and his main role was to quantify the demand-side of the equation. To do so, he employed a willingness to pay (WTP) computation based on simulating shares of preference for Samsung's devices with and without the alleged patent-infringing technology. A second expert for the plaintiff combined Hauser's WTP estimates with supply-side analysis to arrive at the final claim of damages.

Our Conjoint Analysis Book Cited in the Courtroom

In the courtroom, Samsung's attorney cross-examined Hauser, challenging his approach and the use of conjoint analysis. During the grilling, Samsung's lawyer even cited a passage from Sawtooth Software's book, "Getting Started with Conjoint Analysis," where it stated that conjoint studies often come up with WTP values that are higher than prices seen in the marketplace.

Equilibrium Market Prices vs. WTP

We have read Hauser's (publically-available) technical report and note that he investigated respondents' *intrinsic* willingness to pay for the patented features rather than the price a manufacturer could *actually capture* for the enhancements given other alternatives (outside goods) in the marketplace. In our experience, accounting for outside goods in a more comprehensive market simulation leads to more modest estimates of what a manufacturer can actually charge for an enhancement. But, Hauser's role was to estimate consumer WTP rather than the thornier issue of equilibrium market prices. A second expert witness for Apple completed the arguments by addressing the supply side of the equation. We don't know which elements of Apple's overall case were most persuasive, but in the end, the jury sided with Apple, awarding it a little more than \$1 billion in damages.

Reflections

As software manufacturers and admirers of the conjoint methodology, we are regularly taken aback by the diverse and often surprising applications of our conjoint systems around the world. To wit, they are being used to study ways to reduce damage to coral reefs in the British Virgin Islands, improve the adoption of solar and wind power in Europe, and to help the Tanzanian government reduce maternal deaths in its rural countryside. More commonly, firms use our software tools to design products that improve their competitiveness, profitability, and lead to better consumer experiences. And in this case, Sawtooth Software's conjoint tools and literature are wielded as battle axes to wage multi-billion dollar lawsuits in Silicon Valley.