Using Data Analytics to Increase Profitability

LawyerMetrix

Today law firms face unprecedented competition for business. LawyerMetrix uses data analytics to help firms solve their complex business issues. The following case study provides a focused example that is modeled on a client engagement. In this case study, a firm's COO uses data analytics to develop a strategy for increasing profitability.

Problem A Chief Operating Officer at a 600-lawyer firm based in Boston, MA needed a strategy to increase her firm's profitability. The firm had grown from a smaller general practice firm to one with distinct Banking and Finance and Corporate and Business practices, but had about 20 other practices that rounded out their offerings.

Solution The COO contracted with LawyerMetrix ("LMx") to help her develop a strategy supported by rigorous evidence. LMx showed the COO that, when firms concentrate their practice area offerings, they experience significant increases in profitability (see Figure 1). LMx predicted that, at the COO's firm, an aggressive but realistic strategy for concentrating the practices could increase profitability by 20%.

Result The COO recommended that her firm concentrate more of its resources in expanding and deepening its Banking and Finance and Corporate and Business practices, while maintaining the practices that are essential to support these marquee practices. Simultaneously, she recommended that the firm shed its less profitable Energy, Telecom, and Appellate practices. She also outlined an aggressive strategy that both grew the key practices and reduced headcounts in the smaller practices.

Overview

Rina Pichardo is the Chief Operating Officer at Plink & Lonergan ("P&L"), a (fictional) AmLaw 100 firm with about 600 lawyers (350 partners) headquartered in Boston, MA. P&L has nine U.S. offices and two offices abroad. The firm had grown from a smaller general practice firm to one with distinct Banking and Finance and Corporate and Business practices, and had about 20 other practices that rounded out their offerings. Recently the firm's leadership had expressed growing concern about the firm's flat profits since 2012. Accordingly, P&L was in the process of drafting a new ten-year strategic plan.

Pichardo was tasked with developing action items to *increase the firm's profitability*. In her former role at a Big Four accounting firm, she had seen data analytics play a powerful role in identifying and supporting strategy decisions. To that end, Pichardo contracted with LawyerMetrix ("LMx"), an analytics company that helps law firms solve their business problems, and instructed the company to do three things:

1. Use data to identify strategies that differentiate the more and less profitable law firms;
2. Establish rigorous evidence that a selected strategy could work at P&L; and
3. Predict the effect on profitability if the firm's chosen strategy was (1) conservative or (2) aggressive.

What Strategies Drive Profitability?

To identify strategies that differentiate the more and less profitable firms, LMx used data on average partner compensation in the AmLaw 200 (FY2015). The company compiled a list of potential "profit differentiators" – i.e., attributes that make some firms more profitable than others – that included each firm's headquarters location, total attorney headcount, practice area headcounts, annual inflow-outflow of lateral partners, distinctiveness in the financial services practices, and three "concentration" metrics: (1) client industry, (2) practice area, and (3) geography.[1]

[1] The concentration metrics (0 to 1 scale) are calculated using a statistic termed a "Herfindahl Index." A score of zero (0) reflects no concentration (e.g., regarding geography, a firm's attorney headcounts are equal across six offices), a score approaching one (1) reflects high concentration (e.g., 80% of a firm's attorneys are in a single office, and the remaining 20% are distributed across five offices), and a score equal to one (1) reflects total concentration (i.e., all attorneys are in a single office).

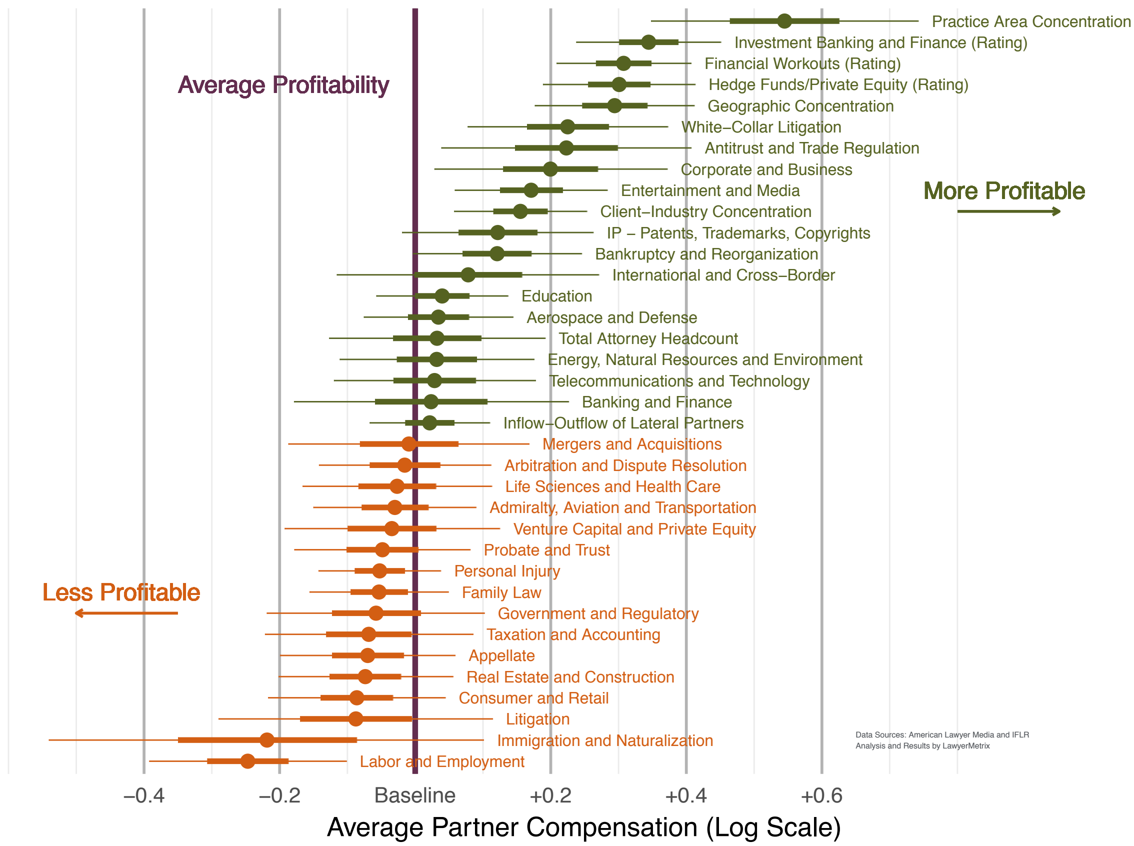

Figure 1: Profitability Differentiators in the AmLaw 200

LMx identified five strategies that are found among the most profitable AmLaw firms. To summarize, the most profitable firms:

1. Have a distinctive financial services practice.
2. Avoid lots of Labor & Employment lawyers (unless L&E is the firm's focus).
3. Embrace a headquarters model (i.e., concentrate lawyers geographically).
4. Concentrate their client base around certain key industries.
5. Focus on a select number of practice areas.

Figure 1 provides the analytical support for the five strategies. It illustrates the statistical relationships between average partner compensation and the potential profit differentiators.[2] The dots reflect an attribute's relationship to profitability (log scale) – specifically, the difference in average partner compensation between a firm with a high versus an average value on the attribute. Lines through the dots represent uncertainty; those not intersecting the baseline reflect a profit differentiator that is "statistically significant."[3]

In reviewing the five strategies outlined by LMx, Pichardo quickly rejected strategies #1 through #4. P&L was not a longstanding financial services firm that could service the high-end market. It also had a number of institutional clients representing diverse industries that relied on P&L for its established Labor and Employment practice. Yet, strategy #5, which

[2]Although Figure 1 does not report headquarters location effects, the statistical model includes an adjustment for a firm's headquarters location. This is important because it ensures that the geographic concentration effect does not exist simply because large labor markets have more geographically-concentrated law firms (e.g., New York City).

[3]In Figure 1, the thick horizontal lines capture the values that are most likely to reflect the true relationship between partner compensation and the firm attributes. The thin line captures the range of all but the most extreme values.

involved concentrating the firm's practice offerings, had come up in meetings with the firm's Executive Committee. Pichardo believed that "practice focus" warranted additional consideration. At the same time, she (and the P&L partners) knew the familiar dictum that "correlation does not imply causation." She pressed LMx to push beyond the correlation-like results presented in Figure 1. Could the LMx analysts provide her with *causal* evidence?

The Causal Effect of Practice Focus

To instill confidence that concentrating P&L's practices would increase profitability *at Pichardo's firm* – a fundamentally causal claim – LMx used a "potential outcomes" analysis.[4] First, they identified pairs of firms that are similar on key profit differentiators (e.g., headcount, geographic footprint) but have different practice concentrations (low versus high). Then, using the "matched pairs" data, they produced a *causal inference* about the effect of practice focus on profitability.

The results indicated that there is a sizable return on investment in focusing a firm's practices. In moving a firm from the bottom concentration tier to the top tier, the effect of practice focus was an increase of $253K in average partner compensation.

For Pichardo, the power in this result was that it gave the strategy a causal interpretation. She could confidently state that practice focus was not only found among the more profitable AmLaw firms generally, but also likely to increase profitability *at her firm*. P&L was on the low end of the practice concentration spectrum, and unlikely to become one of the most focused firms in the industry. Concentrating the practices could increase the firm's bottom line, however, and Pichardo wanted to explore exactly how.

Practice Focus Scenarios and Changes In Profitability

Pichardo's final request to LMx was for evidence that illustrated the consequences of pursuing a practice focus strategy. She wanted to grow the practices that were large and productive and potentially shrink the practices that were small and unproductive. Of the firm's four largest practices excluding Litigation – (1) Banking and Finance, (2) Corporate and Business, (3) Real Estate and Construction, and (4) Government/Regulatory – Banking and Finance and Corporate and Business were the most profitable. In terms of reducing the small practices, Pichardo saw the Energy, Telecom and Appellate practices as the most logical choices because these practices did not serve a support function for the firm's marquee practices.

Pichardo instructed LMx to conduct a scenario planning simulation to illustrate how the adoption of her strategic recommendations would change the firm's profitability. In particular, she asked LMx to predict how profitability would change under two scenarios:

1. **Conservative Practice Focus**: Increase the Banking and Corporate practice area headcounts by 25%.

2. **Aggressive Practice Focus**: Increase the Banking and Corporate practice area headcounts by 50% *and* substantially reduce headcounts in the Energy, Telecom, and Appellate practice areas.

LMx used a statistical simulation to derive the profitability predictions. The simulation made it possible to account for the uncertainty inherent in moving from strategy planning to execution. Specifically, the company simulated values that, in relation to the status quo, represented the *predicted change in average partner compensation* under the Conservative and Aggressive Practice Focus scenarios. Figure 2 illustrates the results.

The top panel of Figure 2 addresses the question: If P&L were to implement the Conservative Practice Focus strategy successfully, how would average partner compensation change? It reports the distribution of predicted changes in profitability, where points along the curve – higher densities – reflect changes in compensation that are more likely to occur. From the simulation, LMx observed that 99%

[4] This approach has gained favor among social scientists and economists because it extends the logic of the experimental research design, including its production of causal inferences, to observational studies where the experimental approach is not feasible.

of the predictions were positive. This was convincing evidence that P&L's profitability would increase after implementing the Conservative Practice Focus strategy. The median value over all simulated values, which indicates one of the *most likely* changes, was an increase of $45K.

In the bottom panel of Figure 2, LMx reported the simulated change in profitability for the Aggressive Practice Focus scenario. As before, nearly all of the predicted changes reflected an increase in profitability (98% were positive). One of the *most likely* changes (based on the median value) was an increase in average compensation of $118K.

The predictions for the Aggressive Practice Focus strategy were characterized by greater uncertainty.[5] The data-driven approach thus reflected back something Pichardo and firm management knew intuitively: in comparison to a conservative approach, an aggressive strategy would present P&L with both greater potential rewards and greater risk.

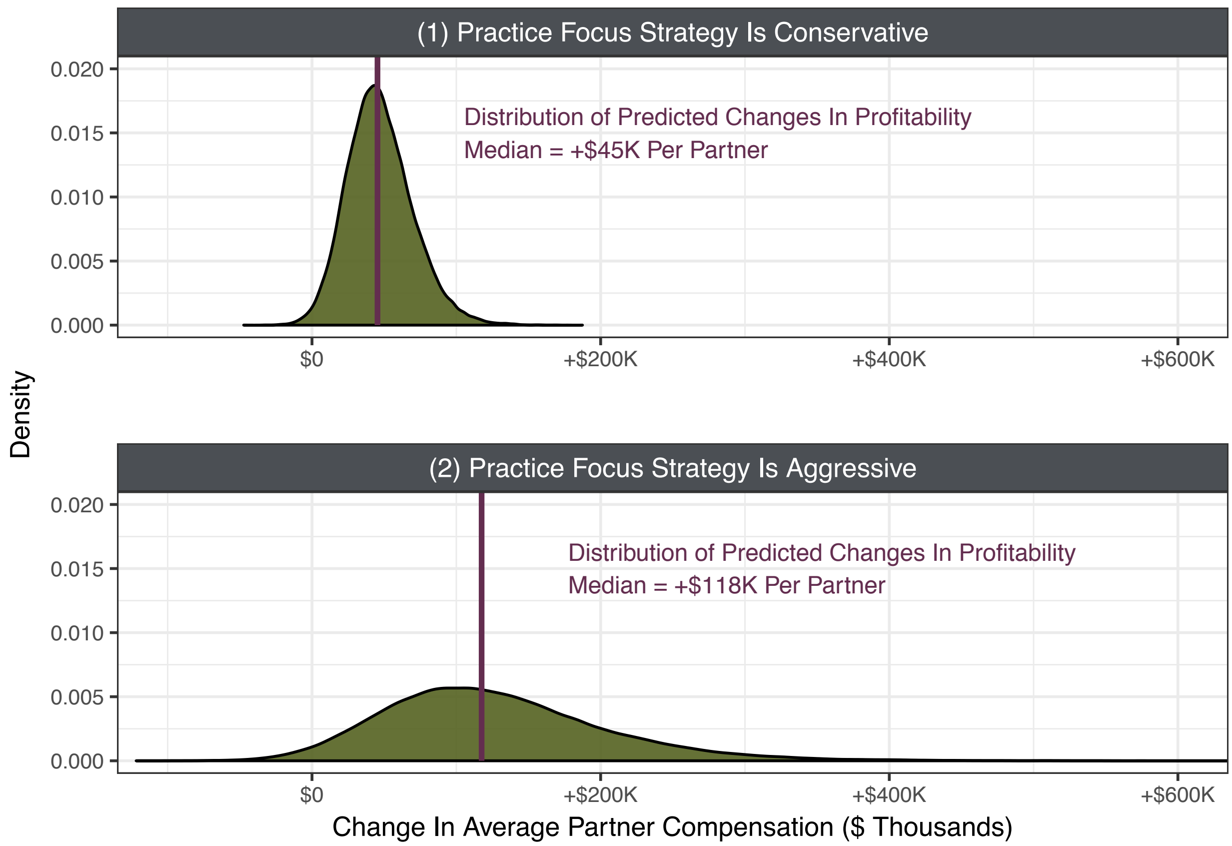

Figure 2: Simulation of Predicted Change In Profitability at Plink & Lonergan Under Two Strategy Scenarios

[5]The bottom panel in Figure 2 shows a wider range of potential values and a flatter curve (i.e., a wider range of change predictions have a similar chance of occurring).

From Planning to Execution

When it came time to recommend action items for P&L's ten-year strategic plan, Pichardo proposed the Aggressive Practice Focus strategy. She could focus on the positive and optimistic aspects of the strategy, including the targeted attorney growth. Furthermore, she could reference the analytics underlying her decision, which predicted a significant profitability increase for the firm of about 20% on average (compared to about 8% growth for the Conservative Practice Focus alternative).

Pichardo viewed her collaboration with LMx as valuable for several reasons. For one, the firm's management was more willing to consider results and conclusions that were produced by a neutral third-party organization. And in letting the company handle the intellectual lift, Pichardo and others were freed up to focus on the emotional and cultural challenges of building up the firm's Banking and Finance and Corporate and Business practices while simultaneously reducing the size and depth of selected smaller practices.

The most valuable aspect of working with LMx was that the company provided her with an objective baseline for measuring the strategy's effectiveness. To be sure, it is straightforward to track headcount growth, but LMx also gave Pichardo a quantitative prediction about what effect such growth would have on P&L's profits. She could use the result to set her partners' expectations accordingly. At the same time, her partners could use the predicted increase to hold Pichardo accountable.

LawyerMetrix uses data analytics to help firms solve their complex business and talent issues. For more information please contact Evan Parker, Ph.D., at eparker@lawyermetrix.net.