Estimating the Internal Rate of Return on the Investment in Law School: Does It "Pay" To Attend Law School?

John B. White
Professor of Finance
United States Coast Guard Academy
United States of America

Abstract

News reports are replete with stories detailing the dismal professional prospects of recent law school graduates, with both salaries and placement rates declining. In spite of these reports, students continue to seek admission into law schools at levels that far exceed the number required to replace retiring attorneys. This study demonstrates that such seemingly irrational behavior is in fact quite rational, with the internal rate of return on an investment in law school being quite significant. Furthermore, there is a high correlation between a law school's rank among its peers and the internal rate of return generated, despite the fact that higher ranked law schools are often the most expensive.

Key words: Internal rate of return; human capital investment; decision to attend law school; salary differentials in for various law schools; opportunity cost of higher education

Introduction

The legal profession has been a pathway to a successful career for several generations. Baby boomers were especially fortunate to obtain admission into law school, an initial step in the process of becoming a lawyer. Television reflected society's general high esteem of the legal profession and depicted attorneys as appealing and successful. From *Perry Mason* (1957-1966) to *Owen Marshall: Counselor at Law* (1971-1974) to *LA Law* (1986-1994) to the many *Law and Order* (and its spin-offs), television shows centered on attorneys have been a staple of the networks for many years. Several shows have depicted lawyers from a slightly different perspective. For instance, Andy Griffith's *Matlock* possessed a keen legal mind but wrapped his character heavily in southern charm. *Boston Legal* provided William Shatner with a somewhat eccentric character that waxed philosophically at the conclusion of each episode. Military law also appealed to the public's desire to see lawyers in action, as *JAG* (the acronym for the military's Judge Advocate General) ran for ten years (1995-2005). Public television was not immune from the appeal of legal themed entertainment, as *Rumpole on the Bailey* provided a glimpse into a London barrister's life for fourteen years (1978-1992) (Ward, 2009).

Our fascination with the legal profession has extended to the movies as well for the last 75 years. Henry Fonda's courtroom depiction of *Young Mr. Lincoln* (1939) helped launch a successful acting career for Fonda as well as creating a lasting image of the sixteenth president before he achieved his fame. The legal system in the 16th century was captured in *A Man for All Seasons* (1966), where the truth was not as powerful as a king's desires. The courtroom was also the settings for comedies, as was evidenced by *My Cousin Vinnie* (1992). Military justice, or lack thereof, was the setting for several films. *Breaker Morant* (1980) showed the British system of military justice after the Boer War, while *A Few Good Men* (1992) provided insight into American military justice. The stress of law school (in preparation for a legal career) was presented with distressing accuracy in *Paper Chase* (1973), a movie that undoubtedly caused some undergraduates to opt not to attend law school (Brust, 2008).

The current state of the legal profession, especially for young attorneys, is not the dramatic and fast-paced life as is most often depicted on either the big screen or television. While graduates of the top law schools continue to do well, the reality is that most new attorneys face a rather bleak job market. Job placement rates for graduates of the top 10 law schools (as ranked by *US News and World Reports* in 2014) exceeds 90%, with annual private sector salaries of $160,000.

For graduates from law schools ranked from 20 to 30, job placement is just over 70% and the average salary falls to $102,600. For schools ranked 40 to 50, job placement is 67% and the average salary is $76,566 (US News).

Several items jump out from these figures. First, getting accepted into a top 10 law school is equivalent to hitting the lottery. However, as the law school's rank falls, job prospects and salaries decline significantly. These questionable job prospects came at a cost of an additional three years of education plus a sizable investment in tuition, fees, books, and living expenses, plus the potential income lost during those three years. Given these less than stellar professional prospects, especially for students attending a law school outside of the top ten, one has to wonder, "Why do they do it? Why make this sizeable investment in time and money for such a questionable payoff?"

Increasingly, many are making the decision not to make the investment in law school. Applications for 2014 are predicted to be at a 30-year low, down approximately 38% from 2010. This is a remarkable turnaround as the market works to adjust an excess supply (Cohen, 2013). But even with this reduction in law school applicants, the job prospects have not improved significantly.

So the question of "why do it" remains. Even with the number of applications at the current level, there are 198 law schools accredited by the American Bar Association, with an additional four newly established schools that have received been provisional accreditation (AmericanBar.org). Clearly, students continue to apply and attend law schools outside of the best programs. Is this behavior an irrational response to the current situation, or do the dire reports exaggerate reality? Since law school applicants are generally among the brightest college graduates, an assumption of widespread irrational behavior among this population is difficult to believe. This suggests that the reports of poor professional prospects may be inaccurate. Perhaps, even in a less than stellar job market, attending law school for three years, and at no small expense, remains a good investment.

This study seeks to evaluate the return on the investment in law school as a financial decision. Many investments require a similar initial expense, with the future payout somewhat uncertain and spread over a number of years. For instance, new commercial real estate construction requires a substantial initial investment that the owners know will take years to recover. Financial techniques, such as the internal rate of return, allow the real estate investor to make a rational decision based on current costs and expected future cash flows. We propose to use these same analytical techniques to evaluate whether the decision to attend law school is rational in today's job market.

Literature Review

Numerous academics have studied the effects of education on future earning and found a significant positive relationship. The Bureau of Labor Statistics reported that for 2012, the median salary for college graduates is over 60% greater than the median salary for someone with a high school diploma alone. Unemployment for college graduates was over 40% less than those with only a high school diploma (Bureau of Labor Statistics, 2014). Over a person's work life, this cumulative differential in earnings is in the millions of dollars (Carnevale, Strohl, & Melton, 2011). Those who earn advanced degrees see their incomes increase even more. These income gains are not evenly distributed across all graduate degrees. For those who earn professional degrees, lawyers are second only to surgeons and physicians in lifetime earnings (Carnevale et al, 2011).

A recent study by Haynie (2013) lists the ten law schools with the highest return on investment. The study notes that the median salary (private sector) for a newly minted attorney is $86,312, while the average debt they graduated with was $108,293. Using data from the individual law schools, Haynie devises an initial salary-to-debt ratio as a measure of the rate of return. Haynie concludes that the University of Texas-Austin, offers the best return on investment with a salary-to-debt ratio of 1.796. This top return is from the program ranked 15th best by *US News and World Report*. Yale and Stanford, ranked 1 and 2 as the top law schools, place 5th and 4th respectively in Haynie's ranking.

Haynie's (2013) study, while a source of discussion and debate, had several flaws. First, the basis of an investment's return is not based on how much is borrowed but rather on the cost, or the required cash outflow flow. Using her measure, if a law school only accepted applicants with sufficient wealth to attend law school without borrowing any money, then that law school's return on investment would be astronomical, as the denominator in its ratio would be zero. Furthermore, the return on an investment is not confined to the cash flows from the first year, but all of the cash flows the investment produces.

For an investment in law school, those cash flows are captured as income throughout the work life. Finally, only incremental cash flows (additional income) should be attributed to the law school tuition investment.

Two recent studies use a more financially accepted discounted cash flow method of estimating the value of law degree. Schlunk (2009, 2011) assumes the cost of the investment in law school to be the tuition plus the opportunity cost of lost income for those three years. He calculates three estimates of the value of a law degree. In Schlunk's studies, an average undergraduate will most likely attend a lower ranked law school, and thus have less of a chance to obtain a highly paid legal position upon graduation. A higher performing undergraduate, whom Schlunk refers to as "solid performer," foregoes a higher income to attend law school, but will attend a better law school than his average counterpart. This graduate stands a much better chance of landing the plum position at "Biglaw." The third straw student constructed is "Hot Prospect," who graduated from a prestigious university with a marketable degree. This student has the highest opportunity cost of attending law school. However, their grades will get them into a top law school and the possibility of a "Biglaw" position is very high. Schlunk focuses on the tuition costs at private law schools because the variability among their tuition rates is much less than state-sponsored programs that often charge a premium for non-residents.

In calculating the "value' of a law degree, Schlunk calculates the net present value comparing the cost of law school to the incremental salary that results from the law degree. (This incremental amount is the legal salary minus the minimum threshold salary.) Median salaries are taken from NALP (National Association of Legal Professionals) published data.

Interestingly, Schlunk finds that none of the three law students have made a good investment. Each produced a negative net present value at a 19.5% discount rate, with "Hot Prospect" having the lowest NPV. Their higher opportunity costs of attending law school implies that their law degree produces less incremental income for them than the same degree provides for their less qualified classmates.

More recently, Simkovic & McIntyre (2013) evaluate an investment in law school and find that the lifetime value is approximately $1 million. Their analysis is similar to Schlunk's in that they look at the incremental salary produced by the law degree. They also adjust for differences in unemployment rates, noting that lawyers have lower rates of unemployment than those who possess only an undergraduate degree. This unemployment differential increases the incremental salary. They use a flat tuition cost of $30,000 per year, or $90,000 for the three-year program, which is the average cost of law school according to data collected and published by the American Bar Association (ABA).

Simkovic and McIntyre (2013) use a 6% nominal interest rate to discount the incremental income. This produces a mean lifetime value of a law degree of $990,000, with a median value of $610,000. This value is not evenly distributed, however. The mean lifetime value to graduates of the lower quartile of law schools is $350,000, while the value to graduates from the upper quartile is $1,100,000. The median internal rate of return (the discount rate that makes the NPV equal to 0) was 16% in nominal terms (13% real return).

While both the Schlunk (2009, 2011) and the Simkovic and McIntyre (2013) studies are more useful than Haynie's simple initial salary-to-debt ratio, they both have significant shortcomings. Simkovic and McIntyre's (2013) use of a 6% discount rate clearly drove the resulting high value. Using a 19.5% discount rate that Schlunk (2009) employed would have yielded negative values similar to what Schlunk found, since the internal rates of return from Simkovic' s and McIntyre's study were below 19.5%.

However, the main weakness of the Schlunk (2009) and Simkovic and McIntyre (2013) studies is that they both use the average costs of law school and the average salaries of law school graduates. But undergraduates do not apply to an average law school. They apply and are accepted to specific institutions. These different schools have different costs, different average salaries of graduates, and different placement rates. Because of the differences in these data, law degrees from different school have vastly different values. It is the institution-specific data that are of interest to the law school applicant. We believe this information, the value of a law degree from a specific school, is of greater value to an individual applicant than the average value from an average law school charging the average tuition. It also provides additional insight for the law school candidate that is accepted by several programs. How can you decide among different programs with different costs, starting salaries and placement rates? Our calculation of a program's internal rate of return incorporates those disparate data items.

This approach is similar to that of White, Miles, & White (2011) in their examination of the internal rate of return on an MBA from various schools. They include tuition and foregone income as the incremental cost of the investment. The reported difference between the post-MBA salary and the pre-MBA salary is used as the estimate of the incremental cash inflows. They conclude that some of the lower ranked MBA programs produce IRRs that exceed "top 10" MBA programs. While some of this surprising result is driven by lower tuition costs, it also is the result of lower pre-MBA salaries for students attending lower ranked programs. Applicants with high pre-MBA salaries are better served to attend top MBA programs.

Methodology & Data

This paper examines a student's decision to attend law school from a financial perspective. While some may feel "called" to study the law, many see law school as the required professional preparation for a fulfilling and financially successful career. Although there are over 200 law schools in the United States, we limit our study to the top 100 programs, as ranked by *US News and World Report*. We also include law schools ranked from 140 to 150 and 11 other programs whose rank was calculated, but not published.

Law school represents a significant investment of time and money for the student, with the benefit coming as incremental income over the course a lawyer's work life. This personal investment by the law student based on the prospect of future income is similar to large-scale capital projects by firms. These projects are characterized by sizeable initial investments that produce revenues in the future. Two commonly accepted capital budgeting techniques used by firms to evaluate capital projects are net present value (NPV) and the internal rate of return (IRR). Net present value is the calculated as the sum of the present value of all of the cash flows, with costs represented as negative cash flows and revenues are positive cash flows. As such, NPV represents the current dollar value resulting from a project. Net present value calculations require a cost of capital, or discount rate, to bring the future cash flows back to the present. This discount rate should be commensurate with the risk associated with the future cash flows.

The internal rate of return, on the other hand, is that discount rate that equates the present value of the cash outflows (costs) with the present value of the future cash inflows (revenues). Since the present value of the cash outflows is equal to the present value of the cash inflows, the IRR is that discount rate that makes the NPV equal to zero. Where the NPV is the dollar value from a project, the IRR signifies the rate of return on the investment as a percent.

Most financial investment performance is measured and discussed in terms of a rate of return, so it is natural to evaluate an investment in law school in a similar way. The critical elements in the investment evaluation are determining the appropriate costs and the resulting revenues. Project analysis is always done on an incremental basis, and that same standard will be used in this study.

It may seem inconsistent to compare tuition costs, which are paid in after-tax dollars, with future pre-tax salaries. However, converting the pre-tax salaries to after-tax income would require a knowledge of an individual law student's dependents and deductions (such as mortgage interest). Obviously, this information is unique to the individual law student and unavailable. In addition, most investments are made with after-tax dollars (traditional IRAs and other retirement accounts being the exception). The rate of return on an investment is always reported as a pre-tax return. Thus, our analysis is consistent with the manner in which other investment returns are commonly reported.

We assume that the average law student comes directly from their undergraduate program. While many MBA programs suggest (or even require) several years of work experience, law schools have no such requirement. Thus, the average first-year law student is someone in their early twenties.

Law school applications are generally submitted in the fall of the applicant's senior year. While their peers are preparing resumes and signing up for job interviews, prospective law students are completing applications and registering to take the LSAT (Law School Admission Test). They are also exploring how they will pay for the tuition, fees, books, and living expenses they will incur over the next three years. Our assumption is that the average law school applicant has decided to attend law school, so they do not engage in the job search their senior year. However, we assume that they are aware of average salaries and job placement rates of recent graduates.

In order to evaluate the financial return from an investment in law school, it is necessary to identify the relevant cash outflows (costs) and cash inflows (income) that accompany such an endeavor.

Costs come from two sources, the explicit cost of law school attendance (tuition), and the implicit cost, or opportunity cost, of foregone income while in law school. Housing costs and food are not included, as these costs are not incremental. If you do not attend law school, you still incur costs for food and shelter. Tuition costs are reported in the *US News* data. We assume tuition remains the same over the required three years of law school. State supported universities commonly charge a higher tuition to out-of-state students, and public law schools are no exception. We treat state schools as two programs, since the different (resident vs non-resident) tuition costs will produce a different IRR.

The opportunity cost of attending law school is the amount of income foregone while in school. Clearly, these costs will vary from student to student, as students would have different employment opportunities. If a student were planning to attend law school, it is doubtful that they would endure the rigors and expenses of employment interviews. While law school applicants are preparing for law school, we assume that they are not actively engaged in a job search and that they are aware of what the employment opportunities are for their classmates.

This employment information is compiled and published by the National Association of Colleges and Employers (NACE). NACE computes the average salary by discipline and an overall average salary for that year's graduating class. For instance, in 2013, the average salary for a graduate in humanities and social sciences was $37,791, while an engineering graduate averaged $62,062. The overall average for the class was $45,327 (Gray & Koncz, 2013).

It is not unreasonable to assume that graduates of prestigious undergraduate programs would command higher salaries than those graduating from second-tier schools. Also, it is reasonable to assume that those applicants accepted to law school are not the average student, but above average, and could expect job offers in excess of the average salary offer. Regrettably, these data are not available. To the extent that the average salary at graduation under-estimates a law school applicant's actual opportunity cost, then our calculation of the actual IRR to law school is over-estimated. The relative ranking of the IRRs for the different law schools, however, is unaffected.

While law school applicants are aware of the salaries their classmates are being offered, they are also aware that everyone is not being offer a job. The unemployment rate at graduation depends on many factors, the economy, the school you attend; and your major, to name a few. The job placement rate for college graduates is a common news item each May as college graduations take place. The Center for Education and the Workforce at Georgetown University has collected and published these statistics for a number of years. Their data are widely quoted in the press. For the sample of all recent graduates, the average unemployment rate is 8.9%, which is a placement rate of 91.1%. For recent engineering graduates, the unemployment rate is 7.5%, or a 92.5% placement rate. Liberal arts and humanities graduates experienced the highest unemployment rate at 9.4%, a 90.6% placement rate (Carnevale, et al, 2013).

Therefore, we assume that the opportunity cost of attending law school is the expected value of the foregone income. We estimate this value to be the product of average salary (as reported by NACE) received by college graduates that year and the employment rate of college graduates that year. This captures an estimate of the expected value of the salary foregone by attending law school.

These figures provide the opportunity cost that, when combined with the tuition, approximates the annual cash outflow for the three year investment in law school. For example, if tuition were $20,000 per year, the average salary at graduation were $30,000, and the job placement rate for new graduates were 80%, then the cost of the first year would be $44,000 ($20,000 + 80% x $30,000). To approximate inflationary pressures and pay increases, we assume salaries in both law and non-law positions increase at 2% per annum. This leads to cost estimates for the second and third year of $44,480 and $44,970 respectively ($20,000 + 80% x $30,000 x1.02, and $20,000 + 80% x $30,000 x 1.02^2). Again, living expenses are excluded from the costs, since investment analysis is concerned only with incremental cash flows.

Determining the incremental cash outflows is only half of the investment analysis. Establishing the relevant incremental cash inflows resulting from the investment is the rest of the equation. Graduating from law school and passing the bar exam do not guarantee a job that requires a law degree. There is a great deal of variability in the placement rates of law school. Not surprisingly, highly ranked law schools have placement rates that exceed lower ranked programs. This suggests that there is significant employment risk after graduating from law school.

We combine the reported placement rate with the salary to derive an expected salary from employment requiring a law degree.

For example, if the placement rate is 65% and the average salary is $80,000, the expected law-related salary is their product, or $52,000. Obviously, if the school has a 95% placement rate and an average starting salary of $150,000, the expected law-related salary is much higher. (It would be $142,500 in this case.)

However, if you do not obtain a law-related position after graduating from law school, you are not unemployable. For this analysis, we assume you can expect to get a job earning no less than what you would be earning currently had you not attended law school. If they graduate from a law school with a 65% placement rate and an average starting salary for their graduates of $80,000, they also have a 35% chance (100% - 65%) of earning $31,836. Thus, their expected salary at graduation is $63,139. ($63,139 = 65% x $80,000 +35% x $31,836.)

The expected incremental revenues that result from the cash investment in law school are not merely the expected average salary at graduation. Continuing the example above, if the law school graduate has an expected salary of $63,139 their first year, the $63,138 does not represent the incremental cash flow. Had they not attended law school, their expected income would have been $25,469. (Continuing the previous example of the $30,000 average salary, an 80% job placement rate for undergraduates, and a 2% salary growth rate: $25,469 = 80% x $30,000 x 1.02^3.) Thus, attending law school with a 65% chance of getting a job that pays $80,000 per year provides an incremental cash flow of their first year of the difference between their expected first year salary and what they expect their salary would have been in the absence of law school. In this example, the incremental cash flow is the difference between the $63,139 expected salary after law school and the $25,469 salary expected that same year had they not attended law school. This difference of $37,670 represents the initial expected incremental cash inflow resulting from the law school investment.

This study uses the IRR to analyze the benefit resulting from an investment in law school. (While calculating the NPV would yield dollar value of the law degree, certainly useful information, NPV requires a risk adjusted discount rate, which would be different for each law school applicant.) We calculate the IRR for each program three times; for the average graduate; for an engineering graduate; and for a graduate in humanities and liberal arts. A law school applicant could look at the IRR calculated in this study and determine if their law school option generates a sufficient return. In addition, the IRRs from various schools would give the applicant an indication of relative value of a law degree from different schools.

The study only looks at the incremental cash inflows that result from the salary. It does not include the non-pecuniary benefits of prestige or social position that attorneys may enjoy. Likewise, potential income from bonuses or future partnership profits is also excluded. Estimates of future bonuses would be an educated guess at best. Future partner profits are equally nebulous. If they were included, it would be necessary to subtract a new partner's required equity investment in the firm. Given the unknown values of these incomes and the fact that they are not even available to those who work in the public sector, these potential futures sources of income are excluded.

The study also assumes a 45-year work life. Law school graduates are typically in their mid-twenties, so we assume a lawyer will work approximately until age 70. This corresponds to the current maximum retirement benefit age for Social Security. Our IRR estimates will decrease if you assume a shorter work life and increase if you plan to work beyond 45 years.

Results

For a college graduate expecting to earn the median wage of $45,327, an in-state student at The University of Virginia, ranked 7th nationally, provided the highest internal rate of return on a 3-year investment in law school. Students paying in-state tuition could expect to earn 23.03% on their investment. The student could expect a starting salary of $160,000 and a placement rate of 96%. Stanford was a close second, producing an IRR of 22.16%. While Stanford also had an average salary of $160,000, their placement rate was slightly lower (95.8%) and their tuition was $4,402 more than Virginia's in-state rate. Yale, the *US News and World Report*'s top ranked law program in 2013, produced an expected IRR of 20.9%, which was ranked 12th.

For engineers, Virginia (in-state) and Stanford were again the top two IRRs, at 11.20% and 10.81% respectively. Yale, with an IRR of 10.17%, was in the 10th spot. These lower IRRs reflect the higher opportunity cost (salaries) that an engineer can earn with an undergraduate degree. While the absolute IRRs are lower for engineers, the schools' IRR ranking is very similar to the IRR ranking for the average graduate.

Law school provides a much higher return for the average humanities and liberal arts graduate. The schools that produce the top IRRs are also very different from that of the average graduate or engineering major.

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The University of Texas (in-state) and Georgetown produced the top two IRRs of 36.9% and 33.5% respectively. Virginia (in-state) generated a respectable 29.9% return, but this was good only for 20th place. Yale's IRR came in 26th place (28.9%) for the humanities and liberal arts major.

While the law school rankings and the IRRs did not track perfectly, the top ranked programs did provide the best returns overall. For the average graduate, of the ten highest IRRs, only three came from programs outside of the top 10 (Texas at 15, Penn at 16, and George Washington University at 21). If you expand to the top 25 IRRs, only one program was not ranked in the top 25. Boston College, which is ranked as the 31st best law school nationally, produced an IRR of 16.16%.

We calculated the 177 IRRs associated with the top 100 programs, six programs ranked in the 140s, and ten programs whose rank was not published. (Recall that state-supported law schools that charged different tuition for non-residents were counted as two programs.) Using our estimates of cash outflows and inflows, some of the programs did not yield a positive IRR. For the average engineering graduate, most (86%) of the programs generated negative IRRs, and only 25 programs had a positive IRR, with Boston College (31st) and Fordham (38th) being the only programs outside of the nationally ranked top 25 law schools to produce a positive return.

For the average college graduate with an average salary of $45,327, 41 programs produced a positive IRR. It is not surprising that more programs produce a positive IRR for the average graduate than engineering graduates, as the engineering graduates have a higher opportunity cost of law school, which translates into a lower incremental salary as a result of law school. For humanities and liberal arts majors, the vast majority (162 out of 177) law programs examined produced a positive IRR. This suggests that law school in general remains a good investment, at least for college graduates with lower opportunity costs.

Conclusion

In spite the glut of news items about the glut of attorneys in the market, our results suggest that law school applicants are making rational investment decisions. Law schools by and large seem to have a significantly positive effect on the incremental salary earned that justifies the investment of three years' worth of tuition and lost income. This is especially true for humanities and liberal arts majors.

The IRRs calculated correspond very closely to the subjective law school rankings published by *US News and World Report*. The top ranked schools, with average annual tuition in excess of $50,000, generally produce the highest IRRs. This is not surprising, because they also have the highest starting salaries and placement rates above 90%.

The preponderance of negative IRRs does not indicate that law school applicants are behaving in an irrational manner. Relatively few programs (only 25) generate a positive return for an engineering major. Not surprisingly, relatively few engineering majors attend law school, choosing instead to begin their career as an engineer at a high salary relative to their peers. A recent study reported engineering majors were only 3% of those students taking the LSAT (Nieswiadomy, 2010). Likewise, it is also not surprising that engineering was not among the twenty most common majors of the entering law students. The five most common majors among those entering law school were (in order) political science, English, psychology, history, and criminal justice, all of which are in the liberal arts and humanities category (Nieswiadomy, 2010).

Students that attend law schools where we have calculated negative IRRs are also not necessarily making an irrational decision. The schools with negative IRRs for humanities and liberal arts majors tend to be lower-ranked schools (or schools where the rank is not published). Those schools have less stringent admissions standards, so it is reasonable to assume that those schools attract students with lower opportunity costs than the average law student. If these students assume their job options after college are lower than their peers, their opportunity cost of attending law school is less, which could make their IRR positive. Likewise, a student might be a scholarship recipient at a school with a low or negative IRR. By reducing the cost of law school, the IRR would increase. There is also the situation where a law school applicant may have a family member or friend who is a lawyer and is willing to allow them to join their firm. In this case, the published job placement rate for this applicant is irrelevant. Their anticipated placement rate is 100%, which greatly increases the expected valued of the post-law school salary.

Our study also does not include any non-pecuniary values associated with working in the legal profession. Lawyers are generally well respected members of their community and enjoy the prestige associated with their profession. This clearly valued aspect of the profession is impossible to estimate and was therefore omitted from our analysis. Including this prestige value would increase all of the rates of return calculated.

In spite of the seeming excess supply of lawyers, our results indicate that law school continues to be a good investment for most applicants. Our conclusions indicate that law school is a better investment for liberal arts majors than engineers, which corresponds to the observed fact that liberal arts majors dominate law school enrollments.

Finally, we note that our conclusions above are based on employment figures reported by *US News*. Many law schools have faced criticism in recent years for manipulating reported employment in an effort to boost their rankings and appeal (Nasri, 2012). Such inconsistencies and data manipulation may distort the results of any quantitative analysis. For a prospective law school applicant, the data reported by *US News and World Report* are the best available, but should be interpreted with care.

References

Brust, R. (2008). 25 Greatest Legal Movies, The. *ABA Journal*, *94*, 38.

Bureau of Labor Statistics. (2014). *Earnings and unemployment rates by educational attainment*. Washington, DC: Bureau of Labor Statistics. Retrieved from http://www.bls.gov/emp/ep_chart_001.htm

Carnevale, A., Strohl, J., & Melton, M. (2011). *What's it worth? The economic value of college majors*. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from https://repository.library.georgetown.edu/handle/10822/559309

Cohen, A. (2013, May 7). Is There a "Lawyer Bubble"? *Time*. Retrieved from http://ideas.time.com/2013/05/07/is-there-a-lawyer-bubble/

Gray, K., & Koncz, A. (2013). *Average Starting Salary for Grads With Bachelor's Degrees Rises 2.4 Percent*. Bethlehem, PA: National Association of Colleges and Employers. Retrieved from http://www.naceweb.org/about-us/press/bachelor-degree-starting-salary-rises.aspx

Haynie, D. (2013, August 13). *10 Law Degrees With the Biggest Return on Investment*. U.S. News and World Report. Retrieved from http://news.yahoo.com/10-law-degrees-biggest-return-investment-145428701.html

Nasri, G. (2012, February 24). Law Schools Feel the Heat From Unemployed Grads. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/grace-nasri/law-schools-feel-the-heat_b_1297823.html

Nieswiadomy, M. (2010). LSAT® Scores of Economics Majors: The 2008–9 Class Update. *The Journal of Economic Education*, *41*(3), 331–333. doi:10.1080/00220485.2010.486739

Schlunk, H. (2011). Mamas 2011: Is a Law Degree a Good Investment Today. *Journal of the Legal Profession*, *36*, 301.

Schlunk, H. J. (2009). *Mamas Don't Let Your Babies Grow Up To Be...Lawyers* (SSRN Scholarly Paper No. ID 1497044). Rochester, NY: Social Science Research Network. Retrieved from http://papers.ssrn.com/abstract=1497044

Simkovic, M., & McIntyre, F. (2013). *The Economic Value of a Law Degree* (SSRN Scholarly Paper No. ID 2250585). Rochester, NY: Social Science Research Network. Retrieved from http://papers.ssrn.com/abstract=2250585

Ward, S. F. (2009). 25 Greatest Legal TV Shows, The. *ABA Journal*, *95*, 34.

White, John B., Morgan P. Miles and Roger M. White (2011), "Estimating the Internal Rate of Return on an MBA: A Comparison of the Return from Top-Ranked & Second-Tier Programs," Journal of Economics and Finance Education, Vol. 10 (1), pp. 67-76.

US News		Tuition	% Employed w/in 9	Median	Expected Median	All Grads $45,327 8.9%*	Engineering Grads $62,062 7.5%*	Humanities Grads $37,791 9.4%*
Rank	School	and fees	mos.	Salary	Salary	IRR	IRR	IRR
1	Yale	$53,600	91.2	$160,000	$145,920	20.90%	10.17%	28.90%
2	Stanford	$50,802	95.8	$160,000	$153,280	22.16%	10.81%	28.80%
2	Harvard	$50,880	93.7	$160,000	$149,920	21.79%	10.61%	29.20%
4	Chicago	$50,720	95.1	$160,000	$152,160	22.05%	10.76%	29.00%
4	Columbia	$55,448	95.4	$160,000	$152,640	21.27%	10.42%	27.80%
6	NYU	$51,150	93.8	$160,000	$150,080	21.76%	10.60%	29.10%
7	Virginia	$46,400	96	$160,000	$153,600	23.03%	11.20%	29.90%
7	Virginia*	$51,400	96	$160,000	$153,600	22.08%	10.78%	28.60%
9	Michigan	$48,250	85.8	$160,000	$137,280	20.91%	10.07%	31.20%
9	Michigan*	$51,250	85.8	$160,000	$137,280	20.39%	9.84%	30.40%
9	Cal-Berkeley	$48,068	82.6	$160,000	$132,160	20.38%	9.77%	31.80%
9	Cal-Berkeley*	$52,019	82.6	$160,000	$132,160	19.71%	9.48%	30.70%
11	Duke	$50,750	72.9	$160,000	$116,640	18.21%	8.61%	32.70%
12	Northwestern	$53,468	84.7	$160,000	$135,520	19.84%	9.58%	30.00%
13	Cornell	$55,220	76.1	$160,000	$121,760	18.11%	8.63%	31.00%
14	Georgetown	$48,835	71.1	$160,000	$113,760	18.18%	8.55%	33.50%
15	Texas	$32,376	76.7	$155,000	$118,885	21.22%	9.19%	36.90%
15	Texas*	$48,075	76.7	$155,000	$118,885	18.29%	8.03%	31.70%
16	Penn	$53,138	91.2	$160,000	$145,920	20.98%	10.21%	29.00%
16	Vanderbilt	$46,804	76.3	$125,000	$95,375	11.71%	< 0%	24.50%
17	UCLA	$45,221	64.8	$145,000	$93,960	14.73%	4.68%	32.20%
17	UCLA*	$51,715	64.8	$145,000	$93,960	13.92%	4.36%	30.30%
18	Southern Cal	$52,598	69.6	$160,000	$111,360	17.35%	8.15%	32.70%
19	Arizona State	$26,267	72.1	$125,000	$90,125	13.90%	< 0%	31.50%

TABLE 1
Comparison of IRRs
Opportunity cost adjusted for jobless rate*

US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Expected Median Salary	All Grads $45,327 8.9%* IRR	Engineering Grads $62,062 7.5%* IRR	Humanities Grads $37,791 9.4%* IRR
TABLE 1 Comparison of IRRs Opportunity cost adjusted for jobless rate*								
19	Minnesota	$36,820	66.3	$110,000	$72,930	7.84%	< 0%	24.80%
19	Minnesota*	$45,484	66.3	$110,000	$72,930	7.14%	< 0%	22.70%
19	Washington U -SL	$47,490	66.6	$105,000	$69,930	5.62%	< 0%	20.80%
21	Alabama	$19,660	87.8	$90,000	$79,020	< 0%	#DIV/0!	15.70%
21	Alabama*	$32,920	87.8	$90,000	$79,020	< 0%	< 0%	13.30%
21	Geo. Washington	$47,535	88	$160,000	$140,800	21.42%	10.34%	31.00%
23	Notre Dame	$45,980	66.7	$87,500	$58,363	< 0%	< 0%	15.80%
23	Emory	$46,414	76	$90,000	$68,400	< 0%	< 0%	14.40%
25	Indiana	$29,946	73.3	$98,000	$71,834	4.64%	< 0%	20.90%
25	Indiana*	$48,021	73.3	$98,000	$71,834	3.51%	< 0%	17.20%
26	Washington & Lee	$43,462	63.6	$83,000	$52,788	< 0%	< 0%	15.50%
26	Iowa	$27,344	72.7	$60,000	$43,620	< 0%	< 0%	4.40%
26	Iowa*	$47,792	72.7	$60,000	$43,620	< 0%	< 0%	3.00%
28	U of Washington	$29,948	62.6	$100,000	$62,600	4.99%	< 0%	24.30%
28	U of Washington*	$42,918	62.6	$100,000	$62,600	4.12%	< 0%	21.10%
29	Arizona State*	$40,815	72.1	$125,000	$90,125	11.91%	< 0%	26.80%
29	Boston Univ	$44,168	57.5	$132,500	$76,188	11.36%	< 0%	30.70%
31	Boston Col	$43,170	72	$145,000	$104,400	16.16%	5.36%	31.50%
31	North Carolina	$21,556	78.1	$117,500	$91,768	13.08%	< 0%	29.30%
31	North Carolina*	$37,066	78.1	$117,500	$91,768	10.97%	< 0%	24.40%
33	William & Mary	$27,800	68.1	$75,000	$51,075	< 0%	< 0%	13.80%
33	William & Mary*	$37,800	68.1	$75,000	$51,075	< 0%	< 0%	12.30%
33	Wisconsin	$21,347	70.1	$70,000	$49,070	< 0%	< 0%	11.90%
33	Georgia	$18,058	66.5	$65,000	$43,225	< 0%	< 0%	11.30%

TABLE 1

US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Expected Median Salary	All Grads $45,327 8.9%* IRR	Engineering Grads $62,062 7.5%* IRR	Humanities Grads $37,791 9.4%* IRR
	Comparison of IRRs Opportunity cost adjusted for jobless rate*							
33	Wisconsin*	$40,043	70.1	$70,000	$49,070	< 0%	< 0%	9.40%
33	Georgia*	$35,480	66.5	$65,000	$43,225	< 0%	< 0%	8.90%
36	Wake Forest	$39,920	65.2	$85,000	$55,420	< 0%	< 0%	16.30%
36	Ohio State	$27,497	71	$72,500	$51,475	< 0%	< 0%	11.80%
36	Ohio State*	$42,449	71	$72,500	$51,475	< 0%	< 0%	9.90%
38	UC-Davis	$49,564	60.5	$85,000	$51,425	< 0%	< 0%	15.90%
38	UC-Davis*	$58,805	60.5	$85,000	$51,425	< 0%	< 0%	14.60%
38	Arizona	$27,288	79.1	$82,343	$65,133	< 0%	< 0%	13.60%
38	Arizona *	$42,298	79.1	$82,343	$65,133	< 0%	< 0%	11.40%
38	Fordham	$49,526	60.3	$138,000	$83,214	12.21%	< 0%	30.00%
41	George Mason	$24,623	79.1	$82,343	$65,133	< 0%	< 0%	14.10%
41	George Mason*	$39,561	79.1	$82,343	$65,133	< 0%	< 0%	11.80%
41	Maryland	$26,093	62.3	$64,000	$39,872	< 0%	< 0%	11.00%
41	Utah	$21,113	74.6	$70,000	$52,220	< 0%	< 0%	10.30%
41	Maryland*	$37,710	62.3	$64,000	$39,872	< 0%	< 0%	9.50%
41	Utah*	$40,142	74.6	$70,000	$52,220	< 0%	< 0%	8.00%
44	BYU	$10,950	58	$84,500	$49,010	< 0%	< 0%	26.10%
44	BYU	$21,900	58	$84,500	$49,010	< 0%	< 0%	22.20%
44	Colorado	$31,495	64.2	$70,000	$44,940	< 0%	< 0%	12.30%
44	Colorado*	$38,281	64.2	$70,000	$44,940	< 0%	< 0%	11.40%
46	Florida	$21,421	64.8	$70,000	$45,360	< 0%	< 0%	13.80%
46	Florida*	$40,786	64.8	$70,000	$45,360	< 0%	< 0%	10.90%
47	Illinois	$38,497	56.3	$73,725	$41,507	< 0%	< 0%	14.90%
47	Illinois*	$45,917	56.3	$73,725	$41,507	< 0%	< 0%	13.80%

					Expected	All Grads $45,327 8.9%*	Engineering Grads $62,062 7.5%*	Humanities Grads $37,791 9.4%*
US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Median Salary	IRR	IRR	IRR
48	UC-Hastings	$46,806	51.6	$83,600	$43,138	< 0%	< 0%	17.80%
48	Tulane	$45,240	64.7	$90,000	$58,230	< 0%	< 0%	17.20%
48	UC-Hastings*	$52,806	51.6	$83,600	$43,138	< 0%	< 0%	16.90%
48	SMU	$44,017	69.5	$85,000	$59,075	< 0%	< 0%	14.60%
48	Houston	$29,748	75.8	$80,000	$60,640	< 0%	< 0%	13.20%
48	Houston*	$39,699	75.8	$80,000	$60,640	< 0%	< 0%	11.80%
48	Florida State	$19,731	78.9	$65,625	$51,778	< 0%	< 0%	5.90%
48	Florida State*	$39,744	78.9	$65,625	$51,778	< 0%	< 0%	4.20%
53	Richmond	$36,850	77.1	$71,250	$54,934	< 0%	< 0%	8.10%
54	Georgia St	$15,154	77.4	$67,838	$52,507	< 0%	< 0%	8.70%
54	Georgia St*	$34,834	77.4	$67,838	$52,507	< 0%	< 0%	6.50%
56	Temple	$19,788	41.2	$87,438	$36,024	< 0%	< 0%	28.80%
56	American	$46,794	47.8	$86,250	$41,228	< 0%	< 0%	19.50%
58	Kentucky	$11,404	81.5	$50,000	$40,750	< 0%	< 0%	< 0%
58	Kentucky*	$33,618	81.5	$50,000	$40,750	< 0%	< 0%	< 0%
58	U Conn	$23,244	60.9	$82,000	$49,938	< 0%	< 0%	19.90%
58	U Conn*	$48,012	60.9	$82,000	$49,938	< 0%	< 0%	15.10%
58	Yeshiva	$50,047	58.8	$75,000	$44,100	< 0%	< 0%	13.10%
61	Nebraska	$14,363	76.2	$52,000	$39,624	< 0%	< 0%	< 0%
61	Nebraska*	$31,044	76.2	$52,000	$39,624	< 0%	< 0%	< 0%
61	Pepperdine	$44,980	51.1	$75,000	$38,325	< 0%	< 0%	15.60%
61	Tennessee	$17,678	67.1	$59,500	$39,925	< 0%	< 0%	7.80%
61	Tennessee*	$63,422	67.1	$59,500	$39,925	< 0%	< 0%	4.10%
64	U of Denver	$39,840	56.8	$75,000	$42,600	< 0%	< 0%	15.00%

TABLE 1

Comparison of IRRs
 Opportunity cost adjusted for jobless rate*

TABLE 1

US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Expected Median Salary	All Grads $45,327 8.9%* IRR	Engineering Grads $62,062 7.5%* IRR	Humanities Grads $37,791 9.4%* IRR
	Comparison of IRRs Opportunity cost adjusted for jobless rate*							
64	Penn State	$40,532	49.2	$67,000	$32,964	< 0%	< 0%	14.00%
64	New Mexico	$15,098	69.9	$60,000	$41,940	< 0%	< 0%	7.10%
64	New Mexico*	$33,908	69.9	$60,000	$41,940	< 0%	< 0%	5.20%
64	Seton Hall	$48,170	72	$135,000	$97,200	13.35%	< 0%	27.60%
65	Baylor	$46,420	73.2	$67,500	$49,410	< 0%	< 0%	6.80%
68	Oklahoma	$19,763	73.6	$55,000	$40,480	< 0%	< 0%	< 0%
68	Oklahoma*	$30,188	73.6	$55,000	$40,480	< 0%	< 0%	< 0%
68	Loyola Marymount	$44,230	46.9	$75,000	$35,175	< 0%	< 0%	16.70%
68	Case-Western	$44,620	55.2	$80,000	$44,160	< 0%	< 0%	16.30%
68	Univ of San Diego	$43,860	55.7	$75,000	$41,775	< 0%	< 0%	14.60%
68	Illinois Inst of Tech	$43,260	56.6	$70,000	$39,620	< 0%	< 0%	12.80%
68	UNLV	$24,749	71.1	$68,000	$48,348	< 0%	< 0%	10.00%
68	UNLV*	$35,749	71.1	$68,000	$48,348	< 0%	< 0%	8.70%
76	LSU	$18,618	84.7	$57,500	$48,703	< 0%	< 0%	< 0%
76	LSU*	$36,006	84.7	$57,500	$48,703	< 0%	< 0%	< 0%
76	U of Miami (FL)	$42,938	61	$70,000	$42,700	< 0%	< 0%	11.70%
76	Loyola-Chicago	$40,582	60.6	$62,058	$37,607	< 0%	< 0%	8.90%
76	Missouri	$18,649	73.8	$60,000	$44,280	< 0%	< 0%	4.60%
76	Missouri*	$35,677	73.8	$60,000	$44,280	< 0%	< 0%	3.20%
80	Univ of Hawaii	$18,094	72.3	$55,000	$39,765	< 0%	< 0%	< 0%
80	Univ of Hawaii*	$34,486	72.3	$55,000	$39,765	< 0%	< 0%	< 0%
80	Univ of Cincinnati	$23,536	67.5	$77,500	$52,313	< 0%	< 0%	15.90%
80	Brooklyn Sch of Law	$49,976	54.3	$75,000	$40,725	< 0%	< 0%	14.10%
80	Catholic Univ	$43,080	66.7	$80,000	$53,360	< 0%	< 0%	13.70%

TABLE 1

US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Median Salary	All Grads $45,327 8.9%* IRR	Engineering Grads $62,062 7.5%* IRR	Humanities Grads $37,791 9.4%* IRR
	Comparison of IRRs Opportunity cost adjusted for jobless rate*				Expected			
80	Lewis & Clark (OR)	$38,180	53.6	$68,350	$36,636	< 0%	< 0%	13.70%
80	Univ of Cincinnati*	$41,044	67.5	$77,500	$52,313	< 0%	< 0%	12.90%
80	Michigan State	$35,377	60.1	$60,000	$36,060	< 0%	< 0%	8.70%
86	Tulsa	$31,836	72.5	$55,000	$39,875	< 0%	< 0%	< 0%
86	Northeastern (MA)	$43,048	55.2	$56,500	$31,188	< 0%	< 0%	8.00%
86	Kansas	$18,664	61.9	$55,000	$34,045	< 0%	< 0%	7.20%
86	Kansas*	$31,474	61.9	$55,000	$34,045	< 0%	< 0%	5.90%
86	SUNY-Buffalo	$22,624	62	$53,000	$32,860	< 0%	< 0%	5.40%
86	SUNY-Buffalo*	$37,114	62	$53,000	$32,860	< 0%	< 0%	4.20%
86	Rutgers-Newark	$25,424	62	$117,500	$72,850	10.73%	< 0%	31.80%
86	Rutgers-Newark*	$37,114	62	$117,500	$72,850	9.40%	< 0%	27.80%
91	Rutgers-Camden	$25,475	65.3	$67,000	$43,751	< 0%	< 0%	11.50%
91	West Virginia	$17,240	79.2	$72,000	$57,024	< 0%	< 0%	10.10%
91	Rutgers-Camden*	$37,207	65.3	$67,000	$43,751	< 0%	< 0%	9.90%
91	West Virginia*	$32,924	79.2	$72,000	$57,024	< 0%	< 0%	8.10%
91	Pittsburgh	$29,468	68	$58,000	$39,440	< 0%	< 0%	5.20%
91	Pittsburgh*	$36,444	68	$58,000	$39,440	< 0%	< 0%	4.60%
94	Oregon	$28,354	49.4	$53,500	$26,429	< 0%	< 0%	10.20%
94	Oregon*	$35,374	49.4	$53,500	$26,429	< 0%	< 0%	9.30%
94	Marquette	$38,690	64.8	$55,000	$35,640	< 0%	< 0%	4.00%
96	Syracuse	$45,690	60.6	$62,500	$37,875	< 0%	< 0%	8.60%
98	St John's	$48,070	55.1	$77,500	$42,703	< 0%	< 0%	15.00%
98	So Carolina	$21,688	59.5	$60,000	$35,700	< 0%	< 0%	10.70%
98	Villanova	$38,910	59.9	$65,000	$38,935	< 0%	< 0%	10.50%

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US News Rank	School	Tuition and fees	% Employed w/in 9 mos.	Median Salary	Expected Median Salary	All Grads $45,327 8.9%* IRR	Engineering Grads $62,062 7.5%* IRR	Humanities Grads $37,791 9.4%* IRR
	Comparison of IRRs Opportunity cost adjusted for jobless rate*							
98	So Carolina*	$43,398	59.5	$60,000	$35,700	< 0%	< 0%	8.10%
102	St Louis	$36,885	67.6	$52,500	$35,490	< 0%	< 0%	< 0%
102	Seattle	$39,884	49.5	$76,250	$37,744	< 0%	< 0%	17.20%
102	Mississippi	$12,388	62.3	$67,500	$42,053	< 0%	< 0%	15.50%
102	Mississippi*	$27,087	62.3	$67,500	$42,053	< 0%	< 0%	12.50%
105	Wayne St	$27,135	56.2	$68,000	$38,216	< 0%	< 0%	14.60%
105	Wayne St*	$29,660	56.2	$68,000	$38,216	< 0%	< 0%	14.20%
105	Mercer	$37,260	67.7	$60,000	$40,620	< 0%	< 0%	5.80%
105	Texas Tech	$22,578	73	$60,000	$43,800	< 0%	< 0%	4.60%
105	Texas Tech*	$32,148	73	$60,000	$43,800	< 0%	< 0%	3.90%
140	So Illinois	$16,995	68.2	$47,500	$32,395	< 0%	< 0%	< 0%
140	So Illinois*	$38,567	68.2	$47,500	$32,395	< 0%	< 0%	< 0%
140	St Mary's (TX)	$30,566	83.1	$60,000	$49,860	< 0%	< 0%	< 0%
140	N Dakota	$10,417	61.7	$50,000	$30,850	< 0%	< 0%	4.30%
140	N Dakota*	$22,394	61.7	$50,000	$30,850	< 0%	< 0%	3.20%
144	San Francisco	$42,364	41.9	$75,000	$31,425	< 0%	< 0%	18.20%
144	Suffolk	$44,064	48.6	$70,000	$34,020	< 0%	< 0%	14.70%
144	Memphis	$16,834	63.6	$63,333	$40,280	< 0%	< 0%	11.70%
144	Duquesne	$35,354	59.7	$65,000	$38,805	< 0%	< 0%	11.00%
144	Memphis*	$38,706	63.6	$63,333	$40,280	< 0%	< 0%	8.70%
144	So Texas	$27,600	73.9	$60,000	$44,340	< 0%	< 0%	3.70%
RNP	Charleston	$37,874	59.2	$45,000	$26,640	< 0%	< 0%	< 0%
RNP	U of DC	$11,265	35.9	$50,000	$17,950	< 0%	< 0%	16.70%
RNP	Golden Gate	$42,010	29.8	$60,000	$17,880	< 0%	< 0%	16.20%

	TABLE 1 Comparison of IRRs Opportunity cost adjusted for jobless rate*				Expected	All Grads $45,327	Engineeri ng Grads $62,062	Humanit ies Grads $37,791
US News		Tuition	% Employed w/in 9	Median	Median	8.9%*	7.5%*	9.4%*
Rank	School	and fees	mos.	Salary	Salary	**IRR**	**IRR**	**IRR**
RNP	U of DC*	$21,285	35.9	$50,000	$17,950	< 0%	< 0%	14.30%
RNP	Toledo	$21,507	47.8	$56,000	$26,768	< 0%	< 0%	13.00%
RNP	Charlotte	$38,600	38.1	$52,000	$19,812	< 0%	< 0%	11.70%
RNP	Toledo*	$33,056	47.8	$56,000	$26,768	< 0%	< 0%	11.20%
RNP	Valparaiso	$38,852	49.2	$52,000	$25,584	< 0%	< 0%	8.30%
RNP	Elon	$36,100	58.6	$58,000	$33,988	< 0%	< 0%	8.20%
RNP	Nova S'eastern	$34,330	67.2	$55,000	$36,960	< 0%	< 0%	3.10%
RNP	Dayton	$33,630	60.8	$50,000	$30,400	< 0%	< 0%	2.90%
RNP	Liberty	$32,002	54.4	$45,000	$24,480	< 0%	< 0%	2.70%

RNP
=>   Rank Not Published

* =>   Non-resident tuition