Efficient Lawyering Payment Systems: A simulation model testing Conditional vs. Contingent Fees

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Abstract

Conditional and contingent fees payment schemes have been found to have varying merits and faults in previous theoretical economic papers. This paper creates and tests a simulation model combining aspects of existing literature on the two payment schemes. The simulation model tests the merits of both, conditional and contingent fees with varying levels of risk of cases and varying levels of merit of cases.

ACKNOWLEDGEMENT

Professor Roger Ware,

Thank you for all of the help and support you have provided me in writing this essay. I appreciate the patience and guidance you afforded me throughout the process. Across different cities, countries and time zones you were understanding and accommodating of both our schedules to allow me to succeed in completing this essay. For that, I am incredibly thankful.

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INTRODUCTION

Inadequate access to justice is a pressing problem in the Canadian legal system. Holding all citizens equally under the rule of law is a foundational tenet of existing democratic legal systems in Canada, the United Kingdom and the United States. The Canadian Action Committee on Access to Justice in Civil and Family Matters' report, "Access to Civil and Family Justice - A Roadmap for Change" identifies that there have always been those who struggle to access justice, however, with current costs of legal services, complex court procedures and overall delays, more and more Canadians are finding it impossible to exercise their legal rights.

Litigants costs' can be divided into cost for legal representation and incidental expenses. The cost for legal representation poses the primary problem, as the latter category of costs tends to be minimal. Legal systems have the option to set up varying payment schemes through which litigants' costs can be covered. Traditionally attorneys are paid a set wage on an hourly basis for the services they provide. This is sometimes called a "flat fee". Two alternative payments to the flat fee are contingent fee and a conditional fee.

BACKGROUND

Contingent Fees

Contingent fees have the client pay legal fees to their attorney contingent on there being recovery in the lawsuit. The legal fees paid are typically a percentage of the award recovered from the suit. This payment scheme attempts to address the issue of access to justice through the rationale that financially constrained claimants can pursue their legal claims in imperfect capital markets (Dana, 1993). The use of contingent fees is prevalent in Canada and the United States, and slowly gaining popularity in parts of Europe. This payment system teeters on the edge of being a champertous agreement. The champerty doctrine prohibits a champertor from bargaining with a plaintiff or defendant to finance a lawsuit in exchange for a portion of the judicial award. Courts fear that contingent agreements distort the incentives of the parties to lean towards the pursuit of profit rather than justice.

Martin Redish, an American professor of law, especially fears this distortion of incentives in the context of public prosecutors (Redish, 2010). Some governments are allowed to hire private attorneys on a contingent fee basis for civil suits against private actors. Although this practice isn't very common, it is increasing in prevalence in the United States, especially in tort litigation against major corporations (e.g. litigation against tobacco companies in their advertising and marketing practices). Similar to the private sphere, a contingent fee can enable the government to pursue legal claims in the public interest without the risk of a negative financial impact to the treasury. However, the public interest may not be advanced through merely monetary gains.

The foundation of Redish's criticisms lies in the fundamental difference between public and private attorneys. A public prosecutor is meant to act in the public interest while a private attorney acts in the best-interests of their client. Contingent fee agreements (CFAs) are strictly banned for criminal suits as it would be highly inappropriate for a prosecutor to be awarded only if the defendant

is convicted. The prosecutor has the duty to determine if the conviction of a defendant will or will not advance societal goals. If a prosecutor is doubtful of the guilt of the defendant or believes their conviction will not in some form serve the public interest, they should not seek to convict the defendant. A contingent agreement would punish the prosecutor for making the decision not to convict and therefore, has the potential of incentivizing the prosecutor to act contrary to the public interest. The goal of a criminal prosecution is not to seek conviction, but to seek justice.

Conditional Fees

Many European countries have resisted the use of contingent fees due to the ethical controversies surrounding the payment method. However, a combination of the pursuit of affordable legal action and market pressures have caused many European nations to adopt conditional fees (also known as success fees) instead. Conditional fees modify the flat fee so the lawyer receives an upscale premium if the case is won. The premium amount is unrelated to the award, and instead related to the level of risk. The conditional/success fee agreement (SFA) states the success premium amount, which is negotiated based on the level of risk to the lawyer. The higher the risk, the higher the conditional fee.

The United Kingdom introduced conditional fees in 1995 after which other European nations including the Netherlands, Belgium and Spain did the same. Since 2013 the United Kingdom allows contingent fees in specific cases, while most other European nations continue to only permit conditional fees. Similar to contingent fees, conditional fees compensate the lawyer for winning the case without making the lawyer's payment solely depend on the success of the case.

LITERATURE AND MOTIVATION

Various legal and economic scholars have investigated aspects of contingent and conditional fees from theoretical and empirical standpoints. The inherently private nature of attorney-client relationships limits the availability of field data, therefore, most empirical studies use game theoretic models to simulate situations in competitive legal markets. The numerous variable aspects of CFAs and SFAs combined with their relatively new implementation and lack of field data creates a range of results regarding their merits and faults in existing literature.

Literature on Contingent Fees

CFAs and SFAs need to balance the goals of increasing access to justice while ensuring lawyers are compensated at a reasonable rate for the services rendered. Under both systems lawyers are incentivized into putting in effort. It is agreed that increased effort leads to improved resolution of the case. However, contingent agreements disincentivize attorneys from investing too much effort, since their compensation remains fixed. This is called the moral hazard problem. This problem is one of the primary concerns surrounding contingent fees.

In a study done by Dana and Spier the effect of asymmetric information within CFAs on the legal market is analyzed. The authors specifically focus on the asymmetry where the attorney is better informed on the merit of the client's case than the client is. A basic bargaining model that is applicable to any negotiations between two parties in which one is better informed about the market than the

other is used. The authors conclude that in a competitive market for legal services, compensation is linear in award. Therefore, there is a unique linear wage contract. This means as the contingent fee percentage increases, the recovered damages and award increases. This result makes intuitive sense and is stated as an assumption in Santore and Viard's paper.

Santore and Viard outline this situation in a simple economic model in their paper titled, Legal Fee Restrictions, Moral Hazard, and Attorney Rents. They show that the optimal effort an attorney shall provide is met when, the expected marginal benefit of one additional unit of effort supplied, equals the expected marginal cost of providing effort (see Appendix A). This implies that attorneys acting optimally will provide effort until they reach this optimal level and not provide any more effort past this level. It is unethical to not provide any effort past a certain extent. Therefore, the privately optimal effort may not be socially optimal, and through this inefficiency the moral hazard problem emerges.

When testing the theoretical model Santore and Viard found that a moral hazard problem may not exist with contingent fees. Their results show that contingent fees can align the interests of the attorney and client when effort level of the attorney cannot be verified. They specifically found that in a competitive market for legal services, the equilibrium contingent fee is strictly greater than the zero-profit condition.

The model makes the fair assumption (that was shown by Dana and Spier) that the probability of success in a case increases with attorney effort, and that attorney effort is not verifiable by the client. If potential claimants are sophisticated and recognize that they can induce attorney effort with higher contingent fee levels, then Santore and Viard hypothesized that the equilibrium contingent fee percentage is greater than the attorney's reservation contingent fee percentage.

Overall it was found that competition for cases via bidding did not result in the contingent fee being bid to low levels and therefore there was no moral hazard problem. The authors predict that this outcome is a result of the sophistication of clients. Potential claimants recognize that attorney effort increases with the contingent fee percentage offered. Sophisticated clients know the optimal effort level that will yield higher expected payoffs for themselves will not be achieved with a low contingent fee. Therefore, the authors conclude that contingent fees incentivize lawyers to put in effort when such effort is not observable, and the contingent fee percentages are not bid to inefficiently low levels for lawyers to obtain cases. These results were found to be true even when unemployment was possible in the simulated legal market.

McKee, Santore and Shelton test this theoretical model (See Appendix A) in a lab experiment to test if the empirical results are consistent with Santore and Viard's hypothesis. The lab experiment was performed with undergraduate students who were trained to act as attorneys and claimants in a simulated competitive market for legal services (see Appendix B). The experiment sought to test two questions derived from Santore and Viard's hypothesis: Is lawyer effort positively correlated with fees paid? and will a market not compete legal fees down to the attorney's reservation contingent fee percentage?

The results of the experiment were significant and in-line with Santore and Viard's hypothesis. There was a definite positive relationship between lawyer effort and contingent fee percentage. Although the predicted levels from the model were slightly above the actual results, the relationship was statistically significant. The experiment also found that contingent fee percentages were not driven down to the reservation level in either of the two settings created (one setting had a steeper cost of effort function than the other). The market was found to be quite stable with no discernible decline in the fees accepted over time.

Existing literature on contingent fees display many merits to the payment system. In the game theoretic models created many of the criticisms surrounding contingent fees (such as the moral hazard problem) are found to not be of major concern. Yet many European nations continue to reject this payment method and prefer to use conditional fees instead.

Literature on Conditional and Contingent Fees

There exists a fair amount of literature on the merits of CFAs. However, there is a limited amount of research comparing contingent fees to conditional fees and other payment schemes (hourly/flat fees). Most literature on this topic can be found in a series of papers done by Winand Emons.

Emons' paper in 2004 titled Conditional vs. Contingent Fees, uses a Bertrand Competition model to test the merits of the two types of fees. In his papers Emons considers the expected award of the case to equal the "merit" of a case. The higher the expected judgement of a case, the higher it's merit. Two scenarios are tested to compare CFAs and SFAs: a scenario where clients have cases with varying levels of merits, and a scenario where clients have cases with different levels of risk. High risk cases have a low probability of winning with high merits (expected award) and low risk cases have a high probability of wining with low expected winnings. Using this model, Emons finds that if lawyers offer CFAs and SFAs simultaneously then high risk clients choose SFAs. This is because lawyers do not have to participate in the high stakes or risk of a case with SFAs. They will be paid regardless of the outcome of the case and only have the success fee to lose. Clients with high risk cases will choose SFAs because if they win they won't have to give as large a portion of the judgement to their lawyers. Clients with low risk cases will choose CFAs since they are likely to win a lower award and can negotiate the conditional fee percentage to be low enough to ensure their share of the outcome is more than their share with a conditional fee.

In 2006 Emons and Garoupa published a paper further comparing CFAs and SFAs using a principal-agent framework. In this framework, the lawyer chooses effort (which is unobservable by the client) after observing the amount at stake in each case. A higher amount of effort invested, yields a higher probability of winning the case. In this framework both lawyers and clients are risk neutral and lawyers start uninformed of their clients' cases (Appendix C). Emons and Garoupa find that that if there is asymmetric information on the expected adjudication of the case the lawyer will prefer the risky strategy and offer a CFA. If there is asymmetric information on the risk of the case, the lawyer will prefer the safe strategy and offer the conditional fee. Multiple scenarios are tested: symmetric and perfect information (lawyer and client know the expected adjudication), symmetric and imperfect

information (neither the lawyer nor the client know the expected adjudication) and asymmetric and imperfect information (the lawyer knows the expected adjudication but the client does not). The paper concludes that both conditional and contingent fee schemes incentivize the lawyer to put in effort, however, contingent fees induce the lawyer to use information they have to assess how much effort to allot. Thus, contingent fees are found to be more effective. Contingent fees shift more risk from the client to the lawyer than conditional fees so they are best for risk neutral clients and lawyers, or situations in which the client is more risk averse than the lawyer (these scenarios allow for more efficient risk sharing with contingent fees than conditional).

In 2017 Emons published his latest paper titled, Legal Fees and Lawyers' Compensation. This paper restates the primary result of his previous papers and finally concludes that there should be freedom of contract so clients and lawyers can choose what agreement suits them best. Emons suggests that policies in Europe and North America must be adjusted to allow for both types of agreements. Although CFAs have their merits, conditional fees are preferred in certain situations. When a client is less risk averse than the lawyer, a conditional fee may be superior, since less risk needs to be shifted to the lawyer. More risk averse lawyers will also prefer conditional fees since they provide better insurance for the lawyer.

PURPOSE

This paper attempts to test a few of the hypotheses and conclusions Emons comes to in the above literature, through a simulation model. The model tested shall be a variation of Emons and Garoupa's (Appendix C), while the simulation design is inspired by McKee, Santore and Shelton's experiment (Appendix B). The simulation shall be adapted to test and compare contingent and conditional fees. Random trials shall be used to test if cases with varying levels of risk, and varying levels of merit do in fact yield the results Emons comes to regarding efficiency and overall payoff.

The method of this paper is inspired by McKee, Santore and Shelton's lab experiment, however, as no subjects are used to test the hypotheses, this paper executes a simulation model rather than a lab experiment. The simulation model shall test the results under both scenarios in Emons' 2004 paper with varying levels of risk and merit. The asymmetric and imperfect information situation from Emons' and Garoupa's 2006 paper is adopted; So, lawyers know the expected adjudication of a case but the client does not. Therefore, the simulation model shall also test some of the results of this 2006 paper.

METHODOLOGY

The simulation model combines aspects of all the models in the literature mentioned above, however, the primary equations used to calculate lawyers' profits and clients' surplus are based on Emons and Garoupa's 2006 paper. One adjustment is made in the model for a conditional fee. The fixed component "w" is eliminated in this paper's conditional fee models. Most other papers do not include a fixed fee component in the lawyers' profits for contingent fees. It is possible Emons included this fixed fee for contingent payments to represent the mandatory disbursement payments a client must make to the lawyer in CFAs. However, to simplify the model and follow the pattern of most

other papers (by Spier, Santore and Viard) there is no fixed fee component in the contingent fee calculations.

Theory

A client who goes to court will receive a high award (J^h) or low award (J^l). Similar to McKee, Santore and Shelton's experiment, a low award is received when the case is lost, and can be interpreted as out-of-court settlements. As effort level (**e**) increases, the probability of wining (**p(e)**) increases. Therefore p(e) is the probability of receiving a high award while $[1 - p(e)]$ is the probability of losing and receiving a low award. It is assumed p'(e) > 0 and p"(e) ≤ 0.

The cost of e units of effort is **C(e)** where C'(e) > 0, C"(e) ≤ 0 and C'(0) = 0. Similar to McKee, Santore and Shelton's experiment, attorneys are required to put in at least 1 unit of effort. Like the principal agent game in Emons and Garoupa's paper, the plaintiff and attorney first sign a contract in which neither knows the expected award. Effort is unobservable by the client, however, after signing the contract, the lawyer (due to their expertise) shall calculate or predict the award **J**, and will choose effort accordingly. Thus, the asymmetric and imperfect information scenario in Emons and Garoupa's 2006 paper is recreated.

<u>Under a contingent fee:</u>

The lawyer and client know **p(e)** and the lawyer also knows **C(e)**. Let **α** represent the contingent fee percentage. The lawyer receives **αJⁱ** where I = *h, l*. Therefore, the lawyer's expected profits are:

$$\pi^C(J) = p(e)\alpha J^h + (1 - p(e))\alpha J^l - c(e)$$

The client's surplus is:

$$S^C(J) = p(e)(1-\alpha)J^h + (1 - p(e))(1 - \alpha)J^l$$

<u>Under a conditional fee:</u>

Under a conditional fee the lawyer receives a regular wage/hourly rate and a success premium if they win the case. Let w represent the fixed wage the lawyer receives for accepting the case, and let d represent the success premium that is unrelated to the award. The lawyer's expected profits are:

$$\pi^K(J) = p(e)(w + d) + (1 - p(e))w - c(e)$$

The client's surplus is:

$$S^K(J) = p(e)(J^h - d) + (1 - p(e))(J^l) - w$$

Note the superscript "**C**" denotes CFAs and "**S**" denotes SFAs.

Simulation Design

The simulation shall involve a game in which the lawyer and client can choose either a conditional or contingent fee agreement. There shall be 2 settings with 2 payment schemes. In one setting (T1) the merits of the cases shall differ, and in another (T2) the risk level of the cases shall differ. The expected payoff to the lawyer and client will be calculated for conditional fees and contingent fees under each variation.

<u>General Simulation</u>

The general simulation is inspired by McKee, Santore and Shelton's experiment in which the lawyer chooses effort the client cannot observe. A high payoff for a win (J^h) is $20 and a low payoff for a loss (J^l) is $5. Effort **e** can range from 1 to 20 units (with 20 units being the highest amount of effort) and the cost of 1 unit of effort is $1. So **C(e) = e**. After the lawyer chooses a target value of effort between 1 and 20, the lawyer rolls a 20-sided die to see if they've won or lost the case. If the rolled number is greater than the target value, then the case is lost and yields an award of J^l. If the rolled value is equal to or less than the target value, then the case is won and yields a high award J^h. For example, if the lawyer chooses a low target value of 3, it is unlikely the lawyer will win the case since they must roll a 1, 2 or 3 to win. If they roll any number between 4 and 20 they will lose. The strictly convex cost function with an increasing marginal cost used in McKee, Santore and Shelton's experiment shall be used. Therefore, the expected payoff and costs of each level of effort are taken from the paper, Contingent Fees, Moral Hazard, and Attorney Rents: A Laboratory Experiment.

Table 1: Costs of Effort

Effort Level	Total Cost
1	.45
2	.50
3	.60
4	.74
5	.93
6	1.14
7	1.39
8	1.66
9	1.95
10	2.27
11	2.61
12	2.96
13	3.34
14	3.73
15	4.15
16	4.58
17	5.02
18	5.48
19	5.95
20	6.44

Contingent Fees:

Based on McKee, Santore and Shelton's experiment, there are four options of contingent fee percentages: 10%, 30%, 50% and 70%. These percentages are chosen because this is the feasible legal range of fees that can be used in a CFA. In Ontario, all CFAs must be drafted to be in compliance with the *Solcitor's Act*. The *Solicitor's Act* allows a contingent fee percentage that is fair and reasonable. What is considered fair and reasonable depends on many factors including the time and effort required and spent on a case, whether special skills or services were required, fees authorized by the statute or regulation etc. Under these conditions a usual range of contingent fees can lie anywhere between ten and seventy percent. The four percentages mentioned above shall be used for the purposes of this

simulation. One of these four contingent fee percentages are randomly selected for each case. Once the effort level, cost of effort, payoff from the case and contingent fee percentages are known, we can calculate the client's surplus and lawyer's profit.

Conditional Fees:

The fixed wage "**w**" for SFAs is set to be $5. This value is chosen because in SFAs the lawyering fees are meant to be lower than the usual flat fee or hourly rate. This makes lawyering services more accessible to capital constrained clients. A fixed wage of $5 is equal to the expected payoff of a client if they lose. Therefore, if a client loses their case, the fixed wage is not so high that it will leave them worse off than they started (thus SFAs can effectively achieve their goal of catering to capital constrained clients).

The premium or success fee "**d**" of SFAs is set to be one of $5 or $10. Clients and lawyers can negotiate this premium to be higher or lower. Both levels of this premium incentivizes lawyers to put in more effort and win the case (since a win can double or more than double their payoff). Once the effort level, cost of effort, payoff from the case and success fees are known, the client's surplus and lawyer's profit can be calculated.

Variations

This section explains how the variations in merits and risks shall be incorporated into calculating the conditional and contingent fee payoffs described above. The variation in merits and risk between simulations shall affect the manner in which the target value of effort is chosen.

T1:

In the first variation of the simulation there is asymmetry on the merits of the case. After accepting a client's case, the lawyer uses their expertise to calculate the merit of the case which will be unknown to the client. According to Emons and Garoupa, the more merit a case has the higher the expected judgement of the case. Therefore, cases with more merit should incentivize lawyers to put in more effort and vice versa. Each case has a merit ranking ranging from 1 to 5. The target value of effort chosen by the lawyer will depend on the merit of the case and correspond to table 2. The actual payoff of the case may or may not be high. There is a known positive relationship between effort level and payoff (the higher the amount of effort the likelier the case will succeed and the payoff will be high). It is important to note the difference between expected and actual payoff. Merit level effects the *expected* payoff of a case. The merit level can be based on the type of case, the precedents that exist for that type of case, the types of evidence and witnesses that are available and all the information the lawyer receives from the client after accepting a case. A lawyer can use their expertise to judge the expected payoff of cases. Regardless of how high the expected payoff is, the *actual* payoff of a case will vary depending on the effort level the lawyer puts into the case and other uncontrollable factors such as the judge, the honesty between the client and lawyer etc. For this reason, the simulation expresses variation in merits of cases through the effort level put into a case.

Table 2: Effort target values of varying merits

Merit Level	Range of target value of effort
1	1 – 4
2	5 – 8

3	9 – 12
4	13 – 16
5	17 – 20

The merit of the case shall be randomly chosen by rolling a 5-sided die. When choosing the target value of a case, the lawyer will roll a die expressing the numbers on the corresponding range or target values. Therefore, if a lawyer receives a case with a merit level of 1. The lawyer will select the target value of effort by rolling a 4-sided die with the numbers 1, 2, 3 and 4 on it. Thus, the varying merit levels will affect the target effort level and therefore the expected payoff. Following the selection of the merit level and target value of each case, the general simulation mentioned above shall continue for either conditional or contingent fee cases.

T2:

 The second variation of the simulation involves a variation in risk. When there is asymmetric information on risk, once again the lawyer can use their expertise to decide if a case has low or high risk. As mentioned above, a high risk case has high expected award with a low probability of winning. Therefore, it can be assumed that risk averse lawyers will allot a high level of effort to low risk cases and less risk averse lawyers will allot a high level of effort to high risk cases. Low risk cases will be represented by 1 and high risk cases will be represented by 2. High and low risk cases will correspond to specific ranges of target values of effort that are outlined in tables 3 and 4.

Table 3: Effort levels of high risk lawyers

Risk Level	Range of target value of effort
1	1 – 10
2	11 – 20

Table 4: Effort levels of risk averse lawyers

Risk Level	Range of target value of effort
1	1 – 10
2	11 – 20

The risk level of each case shall be chosen by flipping a coin where heads shall represent a risk level of 1 and tails shall represent a risk level of 2. After a risk level is decided for each case dice shall be rolled to decide which target value each case shall have (the values on the dice shall correspond with the range of target values for each risk level as seen in table 3 and 4). Once the target value of effort is chosen, the actual effort level is rolled and expected payoff is calculated under the process outlined in the general simulation.

RESULTS
T1:

 1000 trials were done in which the cases had varying merit levels. 500 trials were paid on a contingent fee basis, and 500 were paid on a conditional fee basis. Overall it was found that contingent fee cases yielded higher client's surplus than lawyer's profits. While conditional fee cases yielded higher lawyer's profits than client's surplus.

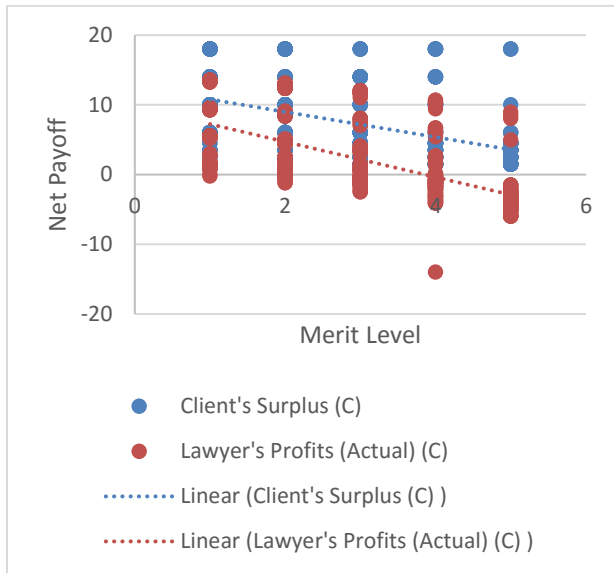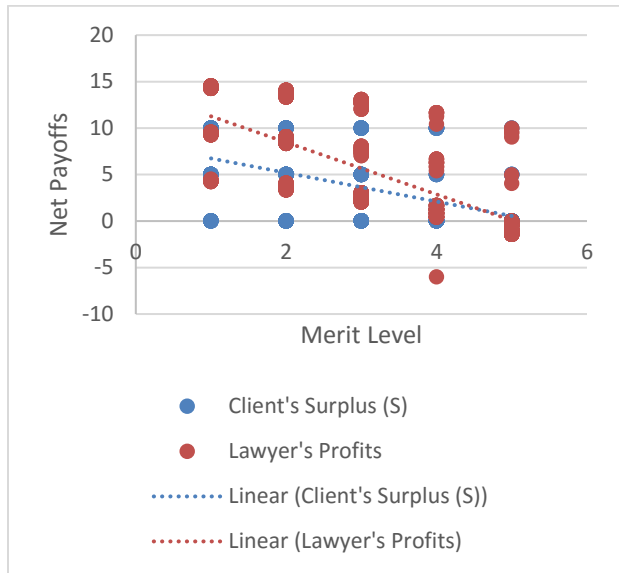**Figure 1: Payoffs with contingent fees with variation in merits**

Figure 2: Payoffs with conditional fees with variation in merits

As seen in figures 1 and 2 there is an overall trend of net payoff decreasing as merit level increases. This decreasing trend is most prevalent for lawyer's profits under conditional fees.

Client's surplus is higher with contingent fees than with conditional fees (Figure 3). The opposite trend is seen with lawyers' profits (Figure 4).

Figure 3: Client's surplus with variation in merits
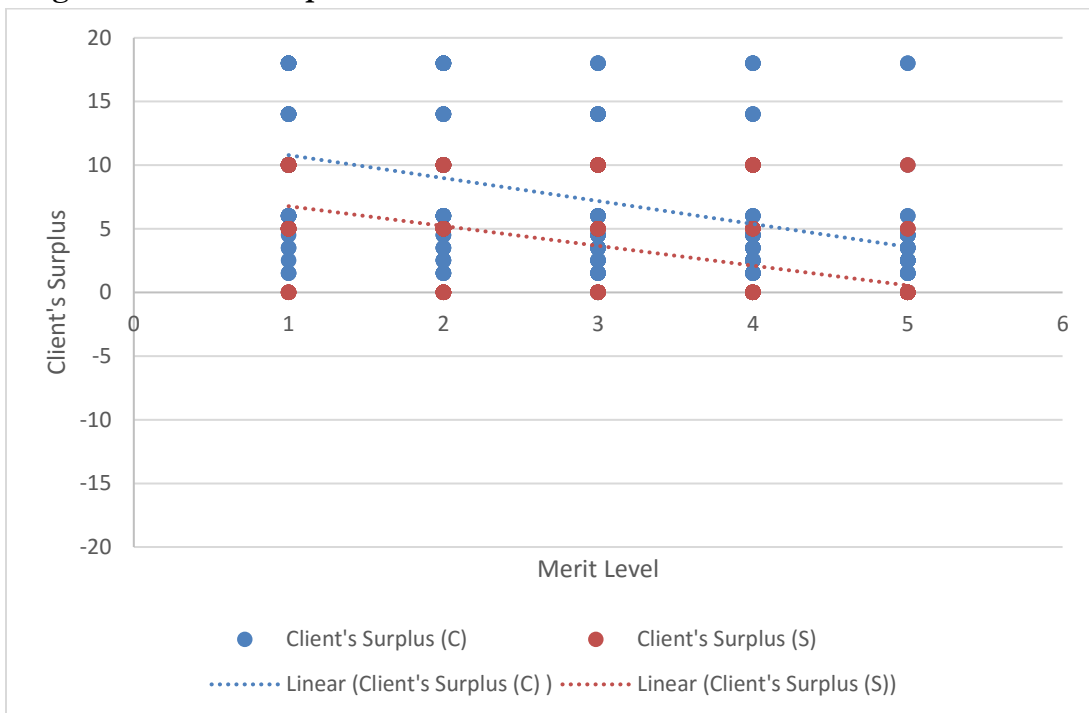
Figure 4: Lawyer's profits with variation in merits
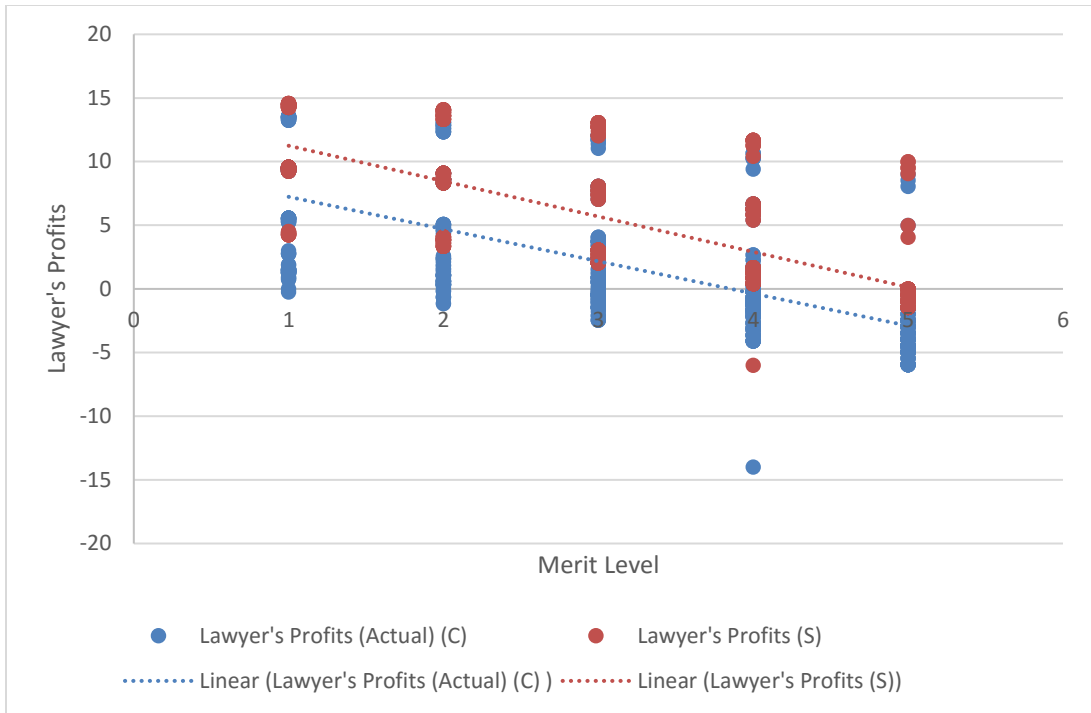
Overall net payoff is equal to the sum of the client's surplus and lawyer's profits. As seen in the box and whisker plot below (Figure 5), the overall net payoff is consistently higher with contingent fees than conditional fees across all merit levels.

Figure 5: Net payoffs with variation in merits
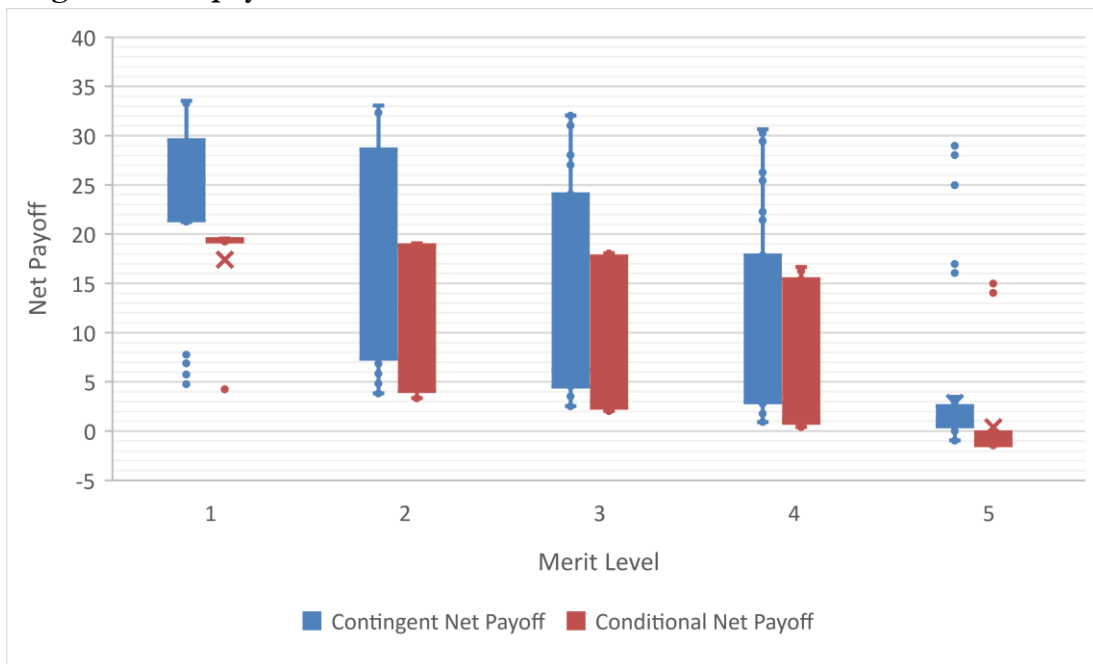
The most drastic difference between net payoffs is seen with a merit level of 1. This means cases with a low merit (low expected payoff) have a much higher net payoff with contingent fee agreements than

conditional fee agreements. The difference in net payoffs decreases as merit level increases. In general, the net payoffs of cases for both contingent and conditional fees decreases as merit level increases.

<u>T1 Key Findings:</u>
With a variation in merits across cases:
1. Contingent fee cases yielded higher client's surplus than lawyer's profits.
2. Conditional fee cases yielded higher lawyer's profits than client's surplus.
3. Client's surplus is higher with contingent fees than with conditional fees.
4. Lawyer's profits is higher with conditional fees than with contingent fees.
5. Overall net payoff is higher with contingent fees than conditional fees across all merit levels.

T2:

   1000 trials were done under T2, in which the cases had varying risk levels and lawyers were either risk averse or risk loving. 500 trials were paid on a contingent fee basis, and 500 were paid on a conditional fee basis.

   Overall it was found that risk loving lawyers yielded lower profits with cases paid on a contingent fee basis than a conditional fee basis. On the other hand, clients' surpluses were higher with contingent fee cases than conditional fee cases, when hiring risk loving lawyers (Figures, 6 and 7).

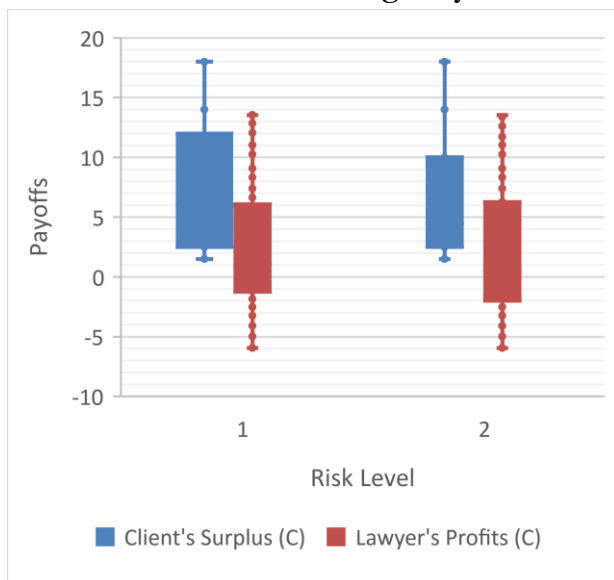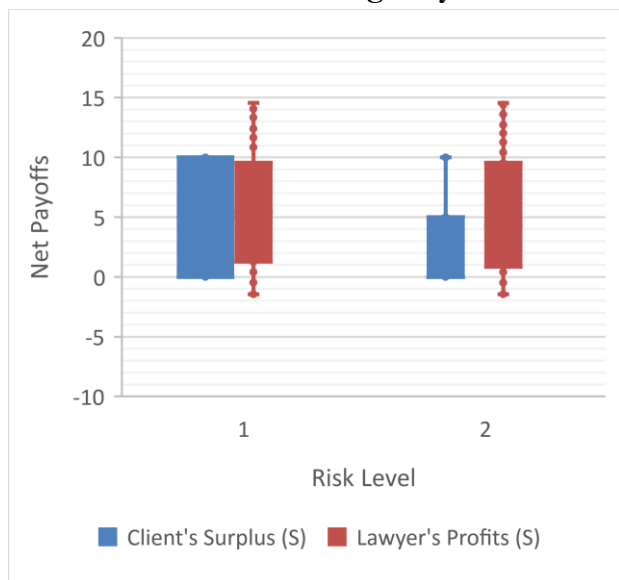**Figure 6: Payoffs with contingent fees and risk loving lawyers**

Figure 7: Payoffs with conditional fees and risk loving lawyers

These results are consistent with the findings under T1 in which there was variation in merits. T2's results for risk loving lawyers and conditional fee cases were also consistent with T1: Lawyer's profits are greater than client's surplus under conditional fee payments. In general client's surplus tends to be slightly higher for low risk cases than high risk cases under both contingent fees and conditional fees. Lawyers' profits, however, remain relatively stable for both risk levels under both contingent fees and conditional fees.

Similar to risk loving lawyers and lawyers under the variations in T1, risk averse lawyers yielded lower profits than clients' surpluses with contingent fee cases, and, higher or equivalent profits to clients' surpluses with conditional fee cases (Figures 8 and 9). Overall clients' surpluses and lawyers' profits are consistent for high and low risk cases under both types of agreements, except, for clients' surpluses with conditional fee agreements. Clients' surpluses under conditional fees with risk averse lawyers is higher for higher risk cases than lower risk cases. These results express the opposite trend to clients' surpluses under conditional fees with risk loving lawyers. Additionally, under both T1 and T2 negative payoffs are almost exclusively only seen under contingent fees with lawyers' profits.

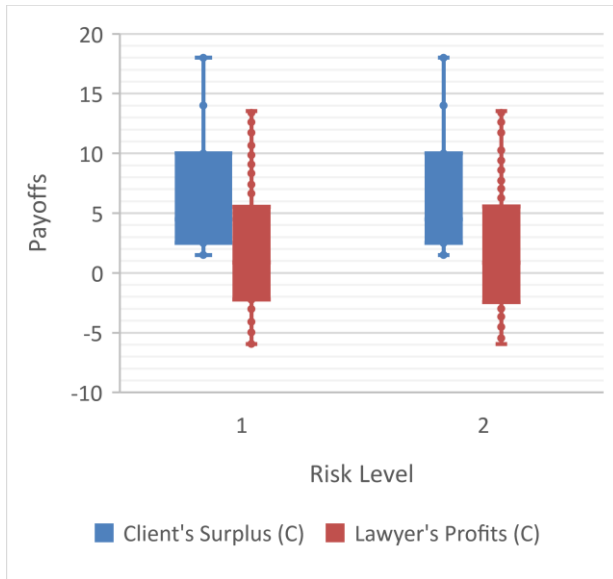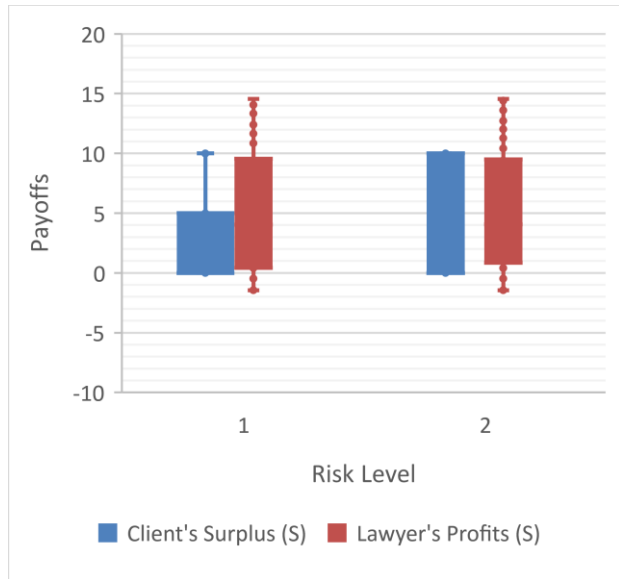| **Figure 8: Payoffs with contingent fees and risk averse lawyers**	**Figure 9: Payoffs with conditional fees and risk averse lawyers**

No strong trends in payoffs exist between different risk levels in cases. Both payoffs (clients' surpluses and lawyers' profits) tend to be relatively equal for high or low risk cases in both contingent fee and conditional fee cases (Figures 10 and 11).

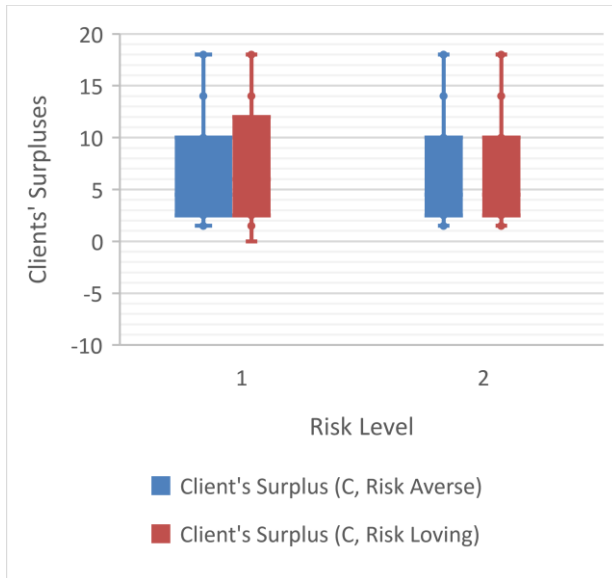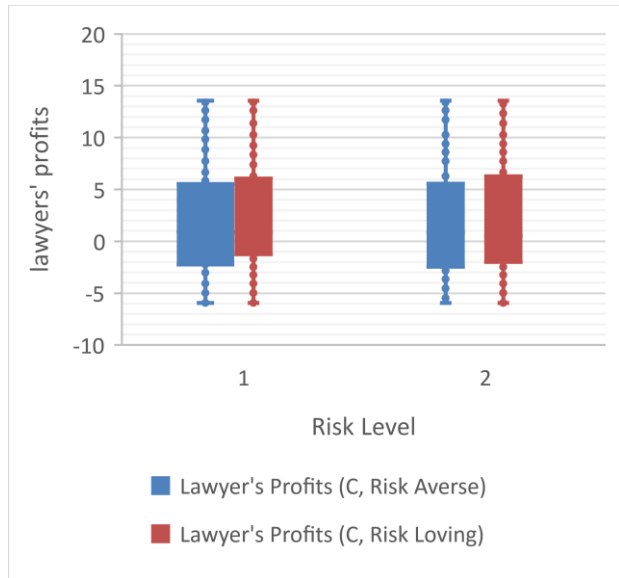**Figure 10: Clients' surpluses with contingent fees**

Figure 11: Lawyers' profits with contingent fees

However, this is not always the case with conditional fees. Clients' surpluses under conditional fees tends to be higher for high risk cases with risk averse lawyers than low risk cases with risk averse lawyers. The opposite relationship exists for risk loving lawyers: Clients' surpluses are higher for low risk cases with risk loving lawyers than high risk cases with risk loving lawyers. Lawyers' profits tend to be fairly consistent across high and low risk cases and risk averse and risk loving lawyers.

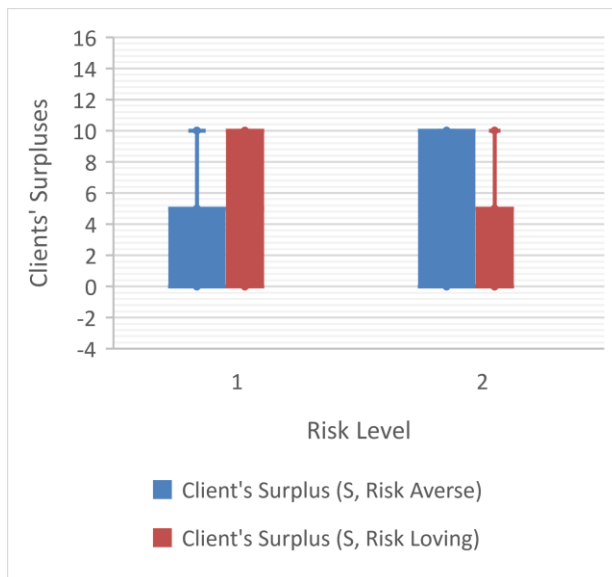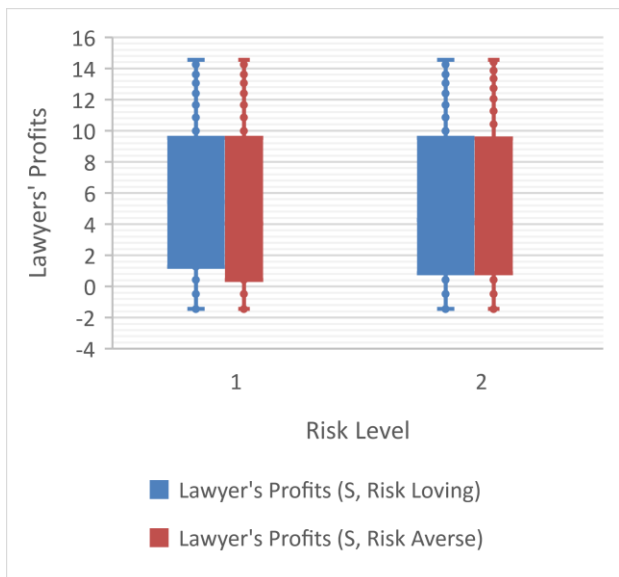**Figure 12: Clients' surpluses with conditional fees**

Figure 13: Lawyers' profits with conditional fees

T2 Key Findings:

With a variation in risk level and lawyers' risk averseness across cases:

1   Contingent fee cases yielded higher client's surplus than lawyer's profits.

2. Conditional fee cases yielded higher or equivalent lawyers' profits to clients' surpluses.
3. Clients' surpluses are higher with contingent fees than with conditional fees.
4. Lawyers' profits are higher with conditional fees than with contingent fees.
5. Clients' surpluses under conditional fees with risk averse lawyers is higher for higher risk cases than lower risk cases.
6. Clients' surpluses under conditional fees with risk loving lawyers is higher for lower risk cases than higher risk cases.
7. Negative payoffs are almost exclusively only seen under contingent fees with lawyers' profits.

DISCUSSION

Simulations T1 and T2 test both scenarios that Emons and Garoupa use to compare CFAs and SFAs.

In their paper published in 2006, Emons and Garoupa created a model that predicted the lawyer will prefer to offer a contingent fee when there is asymmetric information on the merits of the case. The results of simulation T1 revealed that conditional fee cases yielded higher lawyers' profits than contingent fee cases when there is asymmetry in the merits of cases. This result does not support Emons' prediction. Logically, lawyers would prefer the fee agreement that yields them higher profits. According to the results of the simulation, conditional fees can yield higher profits to the lawyer than contingent fees, therefore, lawyers should prefer to offer a conditional fee when there is asymmetric information on the merits of the case.

Emons' model from his paper published in 2004 predicted that high risk clients (clients with high risk cases) would prefer conditional fees to contingent fees. Overall, this prediction is not supported by the simulation since clients' surpluses were found to be higher under contingent than conditional fees (figures 6, 7, 8, 9 and T2 key finding 1). However, Emons' prediction is supported when the results are broken down further.

In the simulation, it was found that high risk clients yielded higher clients' surpluses under conditional fees than low risk clients with risk averse lawyers (T2 key finding 5). However, the opposite relationship existed with risk loving lawyers. Low risk clients yielded higher client surpluses with conditional fees than high risk clients when they had a risk loving lawyer. Therefore, Emons' prediction runs true if these high risk clients hire risk averse lawyers. Practically speaking this is harder since risk averse lawyers will typically avoid taking on high risk cases. The outcome of the simulation makes intuitive sense since risk averse lawyers who take on high risk cases may be more inclined to put in even more effort to minimize the gamble in their cases' outcome. Therefore, Emons' finding can be adjusted to say: if lawyers offer CFAs and SFAs simultaneously, high risk clients should choose SFAs if they have risk averse lawyers and high risk clients should choose CFAs if they have risk loving lawyers.

In his most recent paper from 2017 Emons concludes that there should optimally be freedom of so clients and lawyers can choose what agreement suits them best. The results of simulations T1 and T2 support this conclusion. If a client or lawyer desires to yield a high payoff from a case, their

decision to use a CFA or SFA will differ dependent on many factors. In this study, it is apparent the risk level of the case, the risk averseness of the lawyer and the merit of the case play a role in changing the optimal decision.

In addition to supporting and not supporting some of Emons and Garoupa's predictions, other trends are outlined from this simulation. Under T1 (variation in merits) contingent fees had an overall higher net payoff (conditional + contingent fees) across all merit levels. Under both settings T1 and T2 clients' surpluses were higher under contingent fees than conditional fees on average. This shows that contingent fees do have the ability of making the client better off. European nations currently do not allow contingent fees at their fear that it may distort the incentives of the lawyer and leave the client worse off. However, the results of the simulation show that the client could be better of and gain higher surpluses under contingent fees. Therefore, European nations may want to reconsider their policies that ban contingent fees.

In Emons' latest paper he concludes that policies must permit both payment schemes so that there is freedom of contract for the clients and lawyers to choose what payment scheme is best for them. The results of T2 support this conclusion. As the risk level of the case and risk averseness of the lawyer varies, the optimal decision for the client shall vary. Therefore, ideally both payment schemes should be allowed for the client to make the optimal decision.

CONCLUSION

Emons' predictions in his papers from 2004, 2006 and 2017 are primarily supported by the results of the simulation model in this paper. One prediction regarding variation in merit is not supported. When there is variation in merit levels of cases, conditional fees can yield higher profits to the lawyer than contingent fees and therefore, lawyers would prefer to offer SFAs in such situations. When there is variation in risk levels of the case/client and risk averseness of the lawyers, high risk clients prefer conditional fees if they have a risk averse lawyers, while high risk clients prefer contingent fees if they have risk loving lawyers. Low risk clients prefer conditional fees with risk loving lawyers and contingent fees with risk averse lawyers.

It is important to note that this simulation only allows for the variation of merits and risks in different settings. In actuality, both merit, risk and many other factors are variable for every case. Due to the difficulty in accounting for every variable factor, this simple simulation was created and tested.

Overall, it is clear that in at least some situations contingent fees are preferred to conditional fees. Therefore, there should not be policies banning contingent fees. As Emons concludes in his latest paper, conditional fees may be preferred in specific situations over contingent fees. The ideal policy would permit both contingent and conditional payment schemes and allow the lawyer and client to contract for whichever payment can best meet their needs and yield the highest payoffs.

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APPENDICES

Appendix A

Santore and Viard's Model:

A^H =	High Award (wins the case)	$A^H > A^L$
A^L =	Low Award (loses the case)*	
E =	Attorney's Effort	
P(E) =	Probability client receives A^H	P'(E) > 0, P''(E) < 0
(1 − P(E)) =	Probability client receives A^L	
C(E) =	Attorney's cost of providing E	C'(0) =0, C'(E) > 0, C''(E) > 0
f =	Contingent fee (percentage)	Conditional on A^i, i = L, H
fA^i =	Contingent payment attorney receives	

*Note Santore and Viard assume that disbursement fees are not included as a contingent payment and have to be paid by the client regardless of the outcome of the case. Therefore, the low award is made up of the disbursement fees.

Attorney's expected profits:

$$\pi \equiv P(E)fA^H + [1 − P(E)]fA^L − C(E)$$

Client's Surplus;

$$S^C \equiv P(E)(1 − f)A^H + [1 − P(E)](1 − f)A^L$$

Attorney's optimal level of effort is E*(f)

- When marginal benefit (MB) is equal to marginal cost (MC)

$$E(f) > 0 \qquad \text{for all } f > 0$$

- Attorney effort is an increasing function of the contingent fee:

$$\frac{dE*}{df} = [-P'(E*)(A^H − A^L)] / [fP''(E*)A^H − A^L) − C''(E*)] > 0$$

Maximize S^C subject to $\qquad f\{P(E*)A^H + [1 − P(E*)A^L\} − C(E*) \geq 0$

- The maximized client surplus is conditional on the attorney providing their optimal effort, E^*

$$P'(E*)\frac{dE*}{df}(1 − f)(A^H − A^L) - \{P(E*)A^H + [1 − P(E*)A^L\} = 0$$

- The expected marginal benefit equals the expected marginal cost

The Moral Hazard Problem:

$$\pi \equiv P(E)fA^H + [1 − P(E)]fA^L − C(E)$$

First order condition:

$$P'(E)f(A^H − A^L) − C'(E) = 0$$

- The expected marginal benefit of supplying 1 additional unit of effort (C'(E)) is the increase in P'(E)f($A^H − A^L$)
    - This implies the attorney will provide effort until marginal benefit = marginal cost

Appendix B

Lab Market: Binary Lottery

T1: Setting 1

Purpose: observe level of lawyer effort for each level of contingent fee
- All 22 subjects = lawyers
- Simulated clients
- Set fee rates at .1, .2, .3, .5 and .7
- Effort level can range from 1 to 20
    - 20 being the highest level of effort and 1 being the lowest

Process:
- Contingent fees were randomly selected and placed in a sealed and numbered envelope
    - Did several random-draw trials for this and selected 3 of them
- Each lawyer (subject) rolled a 3-sided die to select an envelope
- Lawyers recorded their fee and selected a level of effort as their target effort level
- Each lawyer rolled a 20-sided die
    - If rolled value < target val   → client wins A^H ($20L prize for client)
    - If rolled value > target val   → client wins A^L ($5L prize for client)
      Therefore, the higher the target value of effort, the likelier the client will win the higher award
- Costs and payoffs were computed using the effort level, fee rates and equations from Santore and Viard's study

T2: Setting 2

Purpose: investigate behaviour of the market for legal representation when attorneys can compete in the domain of contingent fees
- T2a and T2b had different cost-of-effort functions
    - T2b had a steeper cost-of-effort function
- 6 subjects = lawyers
- 16 subjects = clients
    - Subjects were randomly assigned the role of lawyers or clients

Process:
- Each lawyer submits a single bid of contingent fee level to the set of plaintiffs
    - Randomly drawn just like in T1
- All bids were compiled and the range of bids was shown to all the plaintiffs and lawyers
    - Each bid was entered only once – hence "range of bids"
- Clients (plaintiffs) were given the lawyer's cost-of-effort schedule
- Clients fill an "Accept slip" and record a fee they wished to accept in their table
- Lawyer posting that fee got the case of the corresponding client
    - Ties were broken randomly
    - Reputation effects avoided by not identifying lawyers
    - Lawyers were allowed to represent more than one client
    - Lawyers that weren't selected were "unemployed" for that round

- Lawyers recorded their client(s)' contingent fees and selected an effort that would apply to all the clients they represented in that round
- Rolled the 20-sided die for each client they had and the payoffs to the client were determined
  - Payoffs were determined using the same method as in T1
- Clients were told the outcome/award they received

Appendix C

<u>Emons and Garoupa Model (2006):</u>

J= damages $E(J) \in (0, 1)$
- Win → get J
- Loss → get 0

p = Probability of winning (Depends on e)

e = cost of effort $e \in [0, 1]$

p(e) = e^Υ $p(0) = 0, p(1) = 1$
                                                         $Υ \in (0,1)$

  $p_e > 0$, $p_{ee} < 0$ → Effort increases the probability of prevailing at a decreasing rate
- Lower Υ → Higher marginal productivity of effort for low levels of effort
- Higher Υ → Lower marginal productivity of effort for low levels of effort

e*(J) = Efficient level of effort
- Maximizes expected judgement minus cost of effort

e*(J) = (ΥJ)^{1/(1- Υ)}
- Efficient level of effort increases with J

Contingent Fees

S = contingent fee contract

w = fixed component

α = percentage of judgement lawyer gets

$$S = w + \alpha J \quad \text{win}$$
$$= w \quad \text{loss}$$

Utilities:

(risk neutral lawyer and client)

U_L^C = utility of lawyer under CFA U_C^C = utility of client under CFA

$E(U_L^C)$ = Expected utility of lawyer under CFA $E(U_L^C)$ = Expec. utility of client w/ CFA

$$U_L^C (J) = p(e)\alpha J - e + w \qquad U_C^C (J) = (p(e)(1-\alpha)J - w$$
$$E(U_L^C) = E(p(e)\alpha J - e) + w \qquad E(U_C^C) = E(p(e)(1-\alpha)J) - w$$

- if lawyer maxes utility w.r.t effort:

$$p_e \, \alpha J = 1 \qquad \hat{e}^K = (Υ\alpha J)^{1/(1-Υ)}$$

- contingent fees e are dep. Of J

Conditional Fees

K = Conditional fee contract

d = success fee

$$\mathbf{K = w + D} \quad \text{win}$$
$$= \mathbf{w} \quad \text{loss}$$

Utilities:

(risk neutral lawyer and client)

$\mathbf{U_L^S} =$ utility of lawyer under SFA

$\mathbf{E(U_L^S)} =$ Expected utility of lawyer under SFA

$$\mathbf{U_L^S\ (J) = p(e)d - e + w}$$
$$\mathbf{E(U_L^S) = E(p(e)d - e) + w}$$

$\mathbf{U_C^S} =$ utility of client under SFA

$\mathbf{E(U_L^S)} =$ Expec. utility of lawyer w/SFA

$$\mathbf{U_C^S\ (J) = (p(e)(J - d) - w}$$
$$\mathbf{E(U_C^S) = E(p(e)(J - d)) - w}$$

- if lawyer maximizes utility w.r.t effort:

$$\mathbf{p_e\ d = 1} \qquad \mathbf{\hat{e}^K = (\Upsilon d)^{1/(1 - \Upsilon)}}$$

- conditional fees effort are independent of J