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"Third Party Contingency" contracts in settlement and litigation.[†]

by Roland Kirstein[*] and Neil Rickman[**]

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Abstract

We present, for the first time, a model of recent institutional developments in litigation funding across several European jurisdictions. Recognizing the financing constraints that British cost rules may impose on litigants, these new contractual arrangements combine contingency fees with third party cover for cost in the event of losing the case: we call these "Third Party Contingency" (TPC) contracts. Signing a TPC contract can make filing a suit credible and may increase settlement amounts. This does not, however, increase the likelihood of going to trial, since TPC contracts are only of mutual benefit to the plaintiff and the third party when the case settles out of court. We also find that the mere availability of TPCs may generate the above strategic effect.

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Contents

1 Introduction

This paper analyzes a new contractual arrangement that has arisen in Central Europe recently and which is mirrored by developments in other European jurisdictions. A party that is not involved in the legal dispute, like an insurance firm, proposes to cover a (prospective) plaintiff's litigation costs if the case reaches trial in return for a share of the settlement or trial proceeds. We call this a "Third Party Contingency" (or TPC) contract to distinguish it from contingent fee arrangements between a plaintiff and his lawyer.

Legal cost and its funding can play a pivotal role in assuring access to justice and efficiency of the civil legal system.[1] The principal issues at stake are the magnitude and unpredictability of the cost of running a legal case and the timing of this expenditure. Thus, fighting a case can be expensive, and much of the expenditure may occur before an award of damages that can be used to fund it. Furthermore, in some jurisdictions the rules of civil procedure require

[1] Bebchuk (1998) correctly points out that even a legitimate claim can face a cost barrier that is too high. Thus, cases of negative expected value (the expected litigation cost exceeds the expected returns from the judgement) are not necessarily nuisance suits.

the loser (whose identity cannot be known in advance) to pay the winner's cost - the so-called "British" cost rule. Even under this cost-shifting rule individuals who are risk averse or liquidity constrained may be prevented from bringing a case, thus preventing the legal system from achieving its twin goals of compensation and efficient deterrence.

In such circumstances, it is unsurprising - and desirable - that institutional mechanisms develop to provide liquidity and insurance to prospective litigants. Broadly, several sources of such funds can be distinguished. In the US, lawyers typically bear a measure of risk and front-loading of cost by taking cases on a contingency fee basis and meeting upfront disbursements. In some European jurisdictions, insurance companies perform similar functions by offering before-the-event Legal Cost Insurance policies that have to be purchased *before* any actionable event. Elsewhere in Europe (e.g. the UK and Holland) state-sponsored legal aid has, until recently, provided tax-financed assistance to litigants whose financial status satisfied a means test and whose cases were judged to be of sufficient merit.

Importantly, recent experience suggests that the menu of funding arrangements can be extremely dynamic in response to changing circumstances with third parties being involved in many of these developments. In England and Wales, for example, the growing cost of legal aid in the 1980s and early 1990s led the government to withdraw it (in 1999) from many types of case and to promote other (private) means of funding. In particular, conditional fee agreements (where the lawyer waives his hourly fee in the event of loss, in return for a predetermined percentage uplift in the event of success) have moved to the fore along with after-the-event insurance policies, purchased *after* an actionable event from legal cost insurers. The combined effect of these arrangements is to insulate the litigant from own and opposing legal fees in the event of a loss. More broadly, a variety of new insurance products are appearing in a market where Legal Cost Insurance has traditionally been stifled by legal aid.[2]

Other jurisdictions are seeing similar interesting, and economically important, developments. An increasing number of German firms have begun to offer "Third Party Contingency" contract, thereby introducing US-style contingency arrangements under the British cost allocation rule.[3] In line with

[2]See Rickman/Gray (1995); Fenn/Gray/Rickman/Carrier (2002).

[3]FORIS AG (see *www.foris-ag.de*) was the first to introduce such arrangements. Within the last few years, numerous competitors in Germany, Switzerland, and Austria have emerged, among which are *www.juragent-derprozessfinanzierer.de*, *www.prozessfinanzierung.at*, *www.das-profi.de*, *www.gloria-prozessfinanzierung.de* and

UK developments, a TPC contract can be agreed after-the-event. The third party agrees to cover the potential plaintiff's cost in the event of a loss (under the British rule, this will include the opponent's cost). In turn, the third party does not receive an up-front payment (as in the case of Legal Cost Insurance),[4] but demands a pre-specified fraction of any damages if the case is successful.

By helping to diversify the risks of paying all cost in the event of loss, insurers help meet a traditional objection to the use of contingency payment under a British cost rule: contingency fees do not - in principle - protect the plaintiff against own disbursements or the opponent's in the event of a loss.[5] Legal Cost Insurance, on the other hand, would cover both sides' attorney cost as well as the court fees. Only larger legal firms would be able to offer contingent fee contracts containing such protection. If smaller law firms could not provide such extensive cover, then their clients were burdened with it and the objectives of the contingency funding would be blunted. Bearing this in mind, it is important to consider how these new institutional developments may influence the performance of the legal system.

The purpose of this paper is to analyze the particular class of such new arrangements, exemplified by the TPC contracts described above. We pay particular attention to the incentives they create for bringing cases and for settling or trying them. We focus on these because some of the other developments mentioned above have received treatment elsewhere.[6] Our work builds on existing approaches to the economics of litigation, cost rules and fee arrangements. From Posner (1973) through Bebchuk (1984), Reinganum/Wilde (1986) to Spier (1992), economic influences of procedural arrangements (such as cost rules) on legal cases have been considered. Similarly, a variety of authors have analyzed the effects of fee arrangements in this area.[7] Most recently, models have started to look at the role played by Legal Cost Insurance.[8]

In a paper related to ours, Smith (1992) considers the combination of British cost rules with US-style contingency fees. However, his paper bears in-

www.exactor.de.

[4]See Bebchuk (1996) for a general discussion of the strategic effect of up-front payments that decrease the remaining trial cost and thereby make the threat to sue credible; see Kirstein (2000) for an application to the case of Legal Cost Insurance.

[5]Lord Chancellor's Department (1989).

[6]E.g., Emons (2000) on contingent fees, or Gravelle/Waterson (1993).

[7]See Rickman (1994) for a survey.

[8]See Kirstein (2000), van Velthoeven/van Wijck (2001) and Heyes/Rickman/Tzavara (2001).

complete resemblance to the institutional characteristics of mechanisms now emerging to make this link (such as the role of third parties) and his framework ignores many strategic issues. By providing a treatment of the institutional details and some of the strategic issues, our paper is therefore the first game-theoretic model of the latest class of funding arrangements, the TPC contracts.

Cooter/Porat (2002) and Polinsky/Rubinfeld (2001) also analyze third party arrangements in connection with contingent fees. However, these arrangements are amendments to contingent fee contracts between plaintiffs and their attorneys in order to solve double-sided moral-hazard problems that typically arise if the contingent fee is agreed between plaintiff and attorney directly. The TPC contract we analyze here introduces a contingent fee arrangement between a third party and the plaintiff, thus without altering the way his attorney is paid. Since we focus on the contract between the third party and the plaintiff that does not affect the (potential) principal-agent problems addressed by these papers, the latter is left out of focus in our analysis.

The paper proceeds as follows. In the next section, we present a model of the decision to settle, drop, or try a legal case. The model is based on the "divergent expectations approach".[9] It examines the conditions under which a "bargaining range" exists within which the litigants can negotiate a settlement of the case (given their expectations about what will happen if negotiations fail).[10] We then compute and compare the subgame perfect equilibria for three versions of the settlement game: a benchmark case without TPCs; a case where such arrangements are in place at the start of settlement negotiations; and a case where they can be entered into even after the settlement negotiations have already started. The fourth section contains a discussion of possible modifications of the model, and the final section offers our conclusions.

[9]See Posner (1973), Shavell (1982). The paper by Priest/Klein (1984) started a related debate concerning the "trial-selection-hypothesis".

[10]The divergent expectations approach has an attractive simplicity given that we are providing an analysis of a new funding mechanism. An alternative approach would model the settlement process as the outcome of a bargaining game with asymmetric information (e.g. Bebchuk, 1984; Reinganum/Wilde, 1986) that may take place over time (e.g. Spier, 1992). An ongoing empirical debate surrounds which of these approaches is generally most appropriate; Waldfogel (1998) presents evidence that Posner-type models such as ours have more empirical relevance than asymmetric information models.

2 "Third Party Contingency" contracts

2.1 The basic model

Suppose, following an accident, that a plaintiff (P) has a claim against a defendant (D). In order to fund his claim, P may either retain a lawyer on a standard (hourly) contract or enter into a TPC contract with an insurer (denoted F).[11] Our objective is to analyze the circumstances in which such a contract will be offered and purchased, and its effects on the ensuing litigation.

The value of P's claim is $Y > 0$ and aggregate litigation cost (of P and D) are $G > 0$ if a trial occurs, whereas settlement cost are zero for simplicity. We assume the British cost allocation rule: the loser has to pay both parties' cost. Both P and D have subjective beliefs that P will win at trial.[12] We denote the subjective probability beliefs of litigant $i \in \{P; D\}$ as q_i, with $0 < q_i < 1$. Finally, P, D and F are all assumed to be risk neutral.

Our basic model consists of three stages:

1. P and F may bargain over a TPC contract. If they make a contract then F commits to covering the litigation cost if P loses at trial.[13] In turn, F receives a share $\mu \in]0, 1[$ of all returns P acquires. Without a contract, F receives nothing and P has to bear the full litigation cost if he loses in court.

2. In both cases, with and without a TPC contract, the parties, P and D, negotiate over a settlement. If they come to an agreement then the payoffs of P, D, and F are $[S, -S, 0]$ without a TPC contract, and $[(1-\mu)S_T, -S_T, \mu S_T]$ if a TPC contract has been made.[14] To keep

[11] In principle, D may also enter into a contingency-style contract to fund the defense: see Painter (1995) for a discussion of this possibility.

[12] F and P are assumed to have identical beliefs as to the plaintiff's chances of prevailing in court. This assumption does not reflect the expertise F may have in evaluating a case, though it is possible that P's attorney may have provided similar advice. This simplification helps to keep the model tractable. However, it is clearly this expertise that distinguishes firms like FORIS from other credit sources, like banks.

[13] As we have noted, this assumption distinguishes the present contracts from the way that contingency fees have traditionally been envisaged in the context of British cost rules. We note that a veto clause can sometimes relax F's exposure to cost but incorporating this would be beyond the scope of the current paper.

[14] The index T indicates the existence of a TPC contract.

the analysis simple, we assume the symmetric Nash bargaining solution (with equal bargaining power) when solving for the settlement amount.[15]

3. If no settlement has occurred, P decides whether to proceed to trial or not. Without a TPC contract, the expected payoffs are $[q_P Y - (1 - q_P)G, -q_D(Y + G), 0]$. If, on the other hand, a TPC contract exists, the expected payoffs are $[(1 - \mu)q_P Y, -q_D(Y + G), \mu q_P Y - (1 - q_P)G]$.

The basic model rests on the assumption that no settlement negotiations between P and D take place before F and P have bargained about a TPC contract. In the following sections, we analyze the subgame perfect equilibria of this litigation game. Section 2.2 presents an analysis of the subgame in which no TPC contract has been agreed (this subgame is called "Game 1" and would be equivalent to a situation where TPC contracts are not available at all). In section 2.3, we complete the analysis of the basic model (which we call "Game 2"): first, we derive the subgame results when a TPC contract has been signed; then we compare these results with those of Game 1.

In a modification of the basic model, we allow for settlement negotiations between P and D to take place before F and P have talked about a contract. This is called "Game 3" and will be analyzed in section 3.1. The modification demonstrates the strategic impact of the availability of TPC contracts, even if they are not used in equilibrium .

2.2 Subgame without TPC contract: Game 1

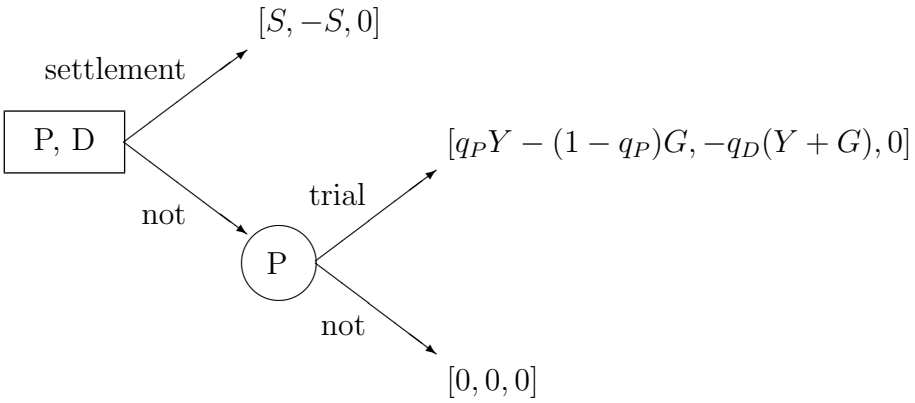
Figure 1 shows the sequence of events in Game 1, the situation without a TPC contract.[16] Here, P and D bargain over the case without P having any recourse to F. The first event is the settlement bargaining between P and D, represented by the rectangle in Figure 1 that is labeled with (P, D). If the

[15] Our results would also hold for an asymmetric bargaining situation, as long as the bargaining power is not entirely in the plaintiff's hands. In that case his position cannot be improved anymore by a strategic move. The Nash bargaining solution can be shown to approximate a number of well-known strategic bargaining extensive forms, so its use does not preclude some examples of non-cooperative behaviour: see Binmore/Rubinstein/Wolinsky (1986).

[16] The analysis of Game 1 does not provide new insights, since the results in this section are long established in the Law and Economics literature since Landes (1971); see Shavell (1982). We review these well known results to introduce our notation, and use them as a benchmark for our own results in the subsequent sections.

parties come to an agreement, the payoffs of P, D and F (who is not involved yet)[17] are $[S, -S, 0]$. The other payoffs can easily be derived, using the trial technology: if P proceeds to trial, he expects to prevail with probability q_P, which would yield Y. He expects to lose with probability $(1 - q_P)$, having to bear litigation cost G. D expects to lose with probability q_D; in this case he has to pay $Y + G$, and zero otherwise. If P does not proceed to court, all players get zero payoff.

Figure 1: Event tree of Game 1



We start the derivation of subgame perfect equilibria with the analysis of the trial stage. If settlement has failed, P will only proceed to trial if the case has positive expected value (PEV), i.e. if $q_P Y - (1 - q_P)G > 0$. This condition is equivalent to

$$q_P > \frac{G}{Y + G} \tag{1}$$

If, on the one hand, condition (1) is fulfilled, then the parties will meet in court if no settlement occurs. In this case, D faces an expected loss of $-q_D(Y + G)$ if he fails to settle. A settlement payment S is hence acceptable for him if it is smaller than the absolute expected loss at trial, or if $S < q_D(Y + G)$. P's expected payoff from trial is $q_P Y - (1 - q_P)G$. Thus, P accepts a settlement that exceeds this expected payment, i.e., if $S > q_P Y - (1 - q_P)G$. Therefore, the bargaining range in a PEV case without TPC contract is

$$]q_P Y - (1 - q_P)G, q_D(Y + G)[\tag{2}$$

[17] Even though the payoff vector contains an entry for F, since Game 1 can also be used as a subgame of Game 2 below, where F plays an active role.

If this bargaining range is empty, the parties do not come to an agreement, and P proceeds to court. The condition for this outcome is $q_P Y - (1-q_P)G > q_D(Y+G)$ or, equivalently,

$$q_P > q_D + \frac{G}{Y+G} \tag{3}$$

If, however, $q_P Y - (1-q_P)G < q_D(Y+G)$ holds, then the bargaining range is non-empty and the parties agree upon a settlement. Applying the symmetric Nash bargaining solution, the predicted bargaining result is $\hat{S} = 0.5[q_P Y - (1-q_P)G] + 0.5q_D(Y+G)$ or, equivalently,

$$\hat{S} = 0.5[(q_p + q_D)(Y+G) - G] \tag{4}$$

If, on the other hand, condition (1) is violated, or $q_P Y < (1-q_P)G$, then the case has negative expected value (NEV).[18] If no settlement occurs, then P will not proceed to court, and both parties' payoffs are zero. Thus, in a NEV case the bargaining range is $]0,0[$ which is an empty set. In this situation, P's threat to sue is not credible.

The above analysis demonstrates that Game 1 will always have a unique subgame perfect equilibrium. Three outcomes are possible depending on the parameters Y, G, q_P and q_D. This leads to our first result.

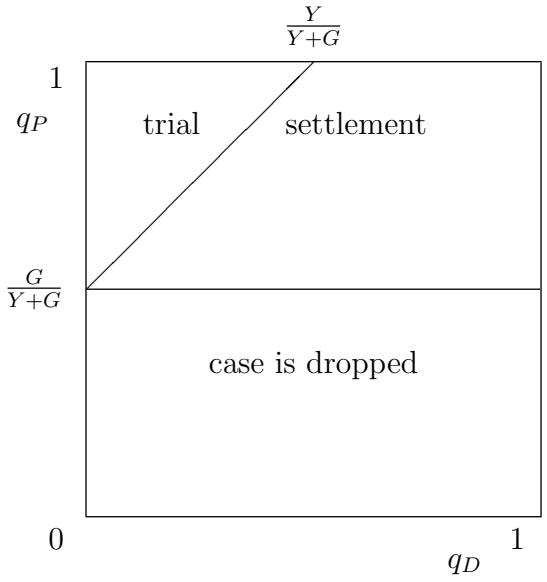
> **Proposition 1:** In the subgame without TPC contract (Game 1), given Y, G, q_P and q_D,
>
> - P refuses to settle and proceeds to court if, and only if, $q_P > q_D + G/(Y+G)$,
> - P and D agree upon a settlement out of court for $\hat{S}$ if, and only if, $G/(Y+G) < q_P < q_D + G/(Y+G)$,
> - drops the case if, and only if, $G/(Y+G) > q_P$

Figure 2 presents the three possible outcomes of Game 1, depending on the parameters q_D and q_P. The diagonal line represents condition (3) while the horizontal line represents condition (1). In the upper left triangle, the subgame perfect equilibrium path is (no settlement, trial).

In the lower rectangle, the case has NEV and the equilibrium path is (no settlement, no trial). In the upper right area, the parties come to a settlement

[18] For simplicity, we ignore ties (such as $q_P Y - (1-q_P)G = 0$).

Figure 2: Outcomes of Game 1



payment $\hat{S}$ in equilibrium. Thus, Result 1 tells us that the case is more likely to be brought the more optimistic P is (relative to D) about his chances at trial (q_P), or if the value of the claim (Y) is high in relation to litigation cost (G).

2.3 TPC contracts before settlement negotiation: Game 2

Having examined the subgame without a TPC contract, we now consider the prospect of P purchasing a TPC contract from F. The TPC contract bargaining between F and P is assumed to happen before any settlement negotiations take place. Our analysis assumes that the details of the contract are publicized to D, though not to the judge should trial ensue.[19]

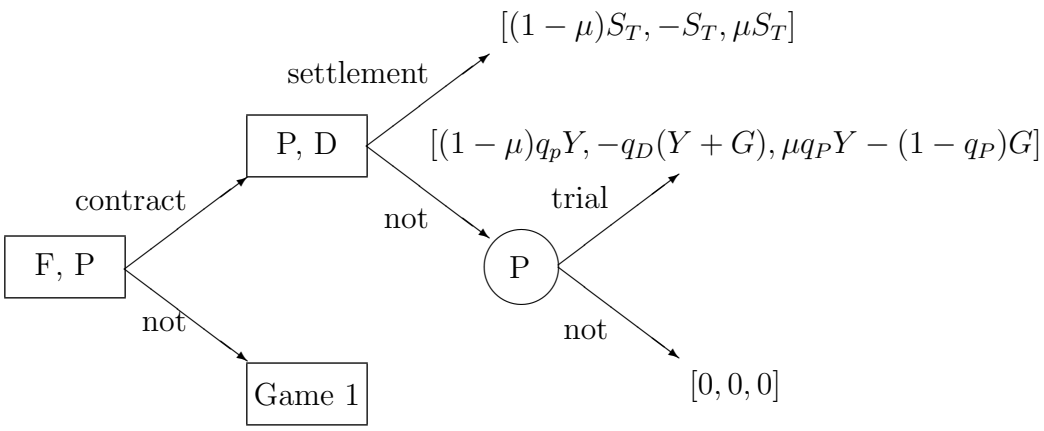
[19]Different jurisdictions deal with this matter in different ways. For example, FORIS AG (see note 2), as well as its competitors, prohibit the publication of this information by a contract clause, while procedural rules in the UK require that some attention is drawn to the existence - at least - of conditional fee arrangements, see (Stanbury (2001)).

2.3.1 The subgame with TPC contracts

Game 2 consists of a contract stage where F and P negotiate over a TPC contract. The contract stage is followed by two subgames: one in which no contract has been made (this is Game 1 we have just analyzed), the other one with a TPC contract. Figure 3 shows this sequence of events. The contract stage is represented by the rectangle labeled (F, P). Following the signing of a contract, settlement negotiations start (represented by the rectangle that is labeled as (P, D)). If P and D come to an settlement, then payment is now denoted as S_T and the payoffs of P, D and F are $[(1-\mu)S_T, -S_T, \mu S_T]$.

The other consequence of a TPC contract is a modification of the payoffs if settlement fails and P decides whether to proceed to trial or not: on the one hand, he no longer worries about the litigation cost, on the other he has to share his returns with F. F's share is denoted by μ; thus, P receives a share of $1-\mu$). Hence, the (expected) payoffs to P, D, and F in case of a trial are $[(1-\mu)q_P Y, -q_D(Y+G), \mu q_P Y - (1-q_P)G]$.

Figure 3: Event tree of Game 2



As long as $\mu < 1$, a TPC contract obviously turns each case into a credible threat, so P will always sue if the parties fail to settle. D faces the expected loss $-q_D(Y+G)$. P expects a gain $(1-\mu)q_P Y$ at trial. If the parties agree upon a settlement payment S_T, then P collects his share $(1-\mu)S_T$. The

comparison of the trial and the settlement outcome allows us to derive the threshold above which a settlement is acceptable for P. He favors a settlement to a trial if $(1-\mu)S_T > (1-\mu)q_P Y$. This is equivalent to $S_T > q_P Y$. Note that this threshold value is greater than in Game 1.

For D, the existence of a TPC contract has no impact on his threshold for which a settlement is agreeable. Therefore, the bargaining range in the presence of a TPC contract is

$$]q_P Y, q_D(Y+G)[\tag{5}$$

Because $(1-q_P)G > 0$, this interval is a subset of the bargaining range without the funding contract, see (2). In particular, the contract results in an upward shift of the lower boundary of the bargaining range corresponding to P's protection against cost. The parties will proceed to court if the bargaining range (5) is empty; i.e. when $q_P Y > q_D(Y+G)$ or, equivalently,

$$q_P > \frac{Y+G}{Y} q_D \tag{6}$$

If this "trial condition" holds, then the parties meet in court and the expected payoffs of P, D, and F are $[(1-\mu)q_P Y, -q_D(Y+G), \mu q_P Y - (1-q_P)G]$. If condition (6) is not fulfilled, the parties come to a settlement agreement

$$\hat{S}_T = 0.5[(q_P + q_D)Y + q_D G] \tag{7}$$

We thereby have derived our second result:

> **Proposition 2:** In the subgame of Game 2 where a TPC contract between F and P has been made,
>
> - P proceeds to trial if, and only if, $q_P > q_D(Y+G)/Y$;
> - P and D settle out of court for $\hat{S}_T$ if, and only if, $q_P < q_D(Y+G)/Y$.
> - If a settlement occurs, then the agreed upon settlement payment is higher than in the subgame without a TPC contract, i.e., $\hat{S}_T > \hat{S}$.[20]

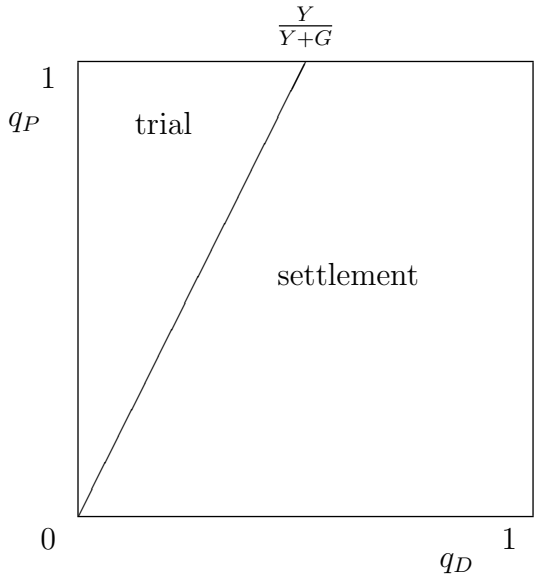
[20]This relation also holds for any other distribution of the settlement rent between P and D, due to an asymmetric bargaining solution, as long as P's share is positive.

Note that $\hat{S}_T$ is strictly greater than $\hat{S}$, the settlement result without a TPC contract. We denote the difference as $\Delta\hat{S} = \hat{S}_T - \hat{S} > 0$.

Figure 4 demonstrates the two possible outcomes of this subgame of Game 2. The area above the diagonal line represents condition (6). If the values of q_P and q_D are situated in this area, then the parties are predicted to proceed to trial, whereas litigants with parameter values below this line are motivated settle their case.

Comparing Figure 4 with our benchmark case in Figure 2 we see that there is no longer a lower rectangle where trial is a non-credible threat. Thus, the insurance function of the TPC contract ensures that P will always be willing to go to court, which is a necessary condition to motivate D to accept positive settlement payments. We also know that, when both games lead to settlement, the presence of a contract generates a higher gross settlement for P.

Figure 4: Outcomes of Game 2

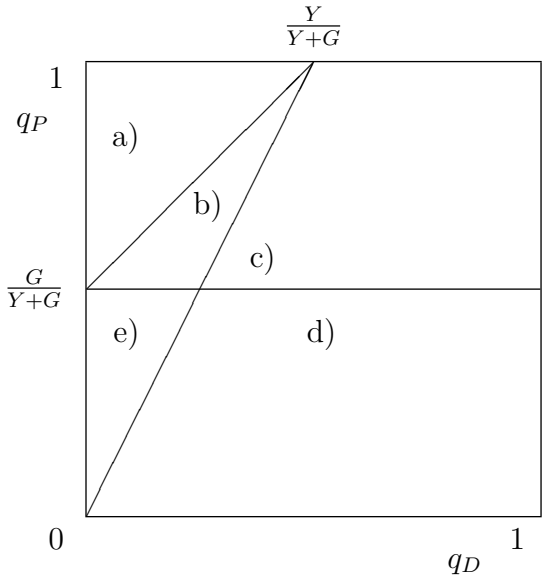


2.3.2 Incentives to make a TPC contract

Under what circumstances will P and F find it mutually beneficial to enter into a TPC contract? To examine this question we compare the outcomes of

the two possible subgames of Game 2, the one with a TPC contract and the one without. Figure 5 brings together Figure 2 and Figure 4. According to Figure 5, we have to distinguish five cases when comparing the two subgames that start right after the contract stage in Game 2.

Figure 5: Comparison of Games 1 and 2



Case a) In the upper left triangle of Figure 5, labeled **a)**, both litigants are overly optimistic. Therefore, they would meet in court regardless of whether a TPC contract has been made. However, the contract increases P's expected payoff by $\Delta\hat{S}$. Thus, it would benefit P if $(1-\mu)q_PY > q_PY - (1-q_P)G$ or, equivalently, $\mu q_PY < (1-q_P)G$: the agreed share for F must not be "too large". F, in turn, will find it beneficial to offer a TPC contract if $\mu q_PY - (1-q_P)G > 0$. Clearly, this contradicts the condition for P. Thus, in the subgame perfect equilibrium, P takes the case to trial unaided. The equilibrium path under the parameters defining a) is:

(no contract, no settlement, trial).

Case b) Under the parameter combinations in the triangle labeled **b)**, the parties would settle in the absence of a TPC contract. Then, P's payoff

would be $\hat{S}$. However, under the contract P proceeds to court, which leads to an expected payoff of $(1-\mu)q_P Y$. P finds a TPC contract beneficial if this exceeds the settlement payoff $\hat{S}$ he receives in the absence of such a contract. The condition for F to find a contract beneficial is $\mu q_P Y > (1-q_P)G$. It is easy to show that these two conditions, if they are simultaneously true, would imply $q_P > G/(Y+G) + q_D$, which is the condition for case a) and thus contradicts the conditions for case b).[21] Hence, under the parameter constellations that characterize case b), a TPC contract cannot be mutually beneficial for F and P. Thus, no contract will be made, and the analysis of Game 1 shows that the case will be settled out of court. The subgame perfect equilibrium path is:

$$\text{(no contract, settlement with } \hat{S}\text{)}.$$

Case c) In the upper right area of Figure 5, denoted as **c)**, the parties settle regardless of the presence of a TPC contract; the contract simply increases the settlement result to $\hat{S}_T$ from $\hat{S}$. P receives $(1-\mu)\hat{S}_T$, which is beneficial if $(1-\mu)\hat{S}_T > \hat{S}$ or, equivalently, $\mu < \Delta\hat{S}/\hat{S}_T$. This is P's threat point in the contract negotiations with F. Note that this threat point is strictly positive, since $\Delta\hat{S} > 0$. The bargaining range between F and P thus is $[0, \Delta\hat{S}/\hat{S}_T]$. For F, any positive share $\mu > 0$ would be beneficial. Thus, a non-empty range of values for μ exists that makes the TPC contract beneficial for both F and P. Applying the symmetric Nash bargaining solution leads to an agreed share, denoted as $\hat{\mu}$, with

$$\hat{\mu} = \frac{\Delta\hat{S}}{2\hat{S}_T}. \tag{8}$$

Note that $\Delta\hat{S}/2\hat{S}_T \in]0,1[$. The subgame perfect equilibrium path of Game 2 then is:

$$\text{(contract with } \hat{\mu}\text{, settlement with } \hat{S}_T\text{)}.$$

Case d) In the lower right area labeled **d)**, the parties would settle if a TPC contract has been signed. Without it, the case has NEV and therefore

[21] $(1-\mu)q_P Y > \hat{S}$ is equivalent to $\mu q_P Y < 0.5[q_P(Y-G) - q_D Y + (1-q_P)G]$. With $\mu q_P Y > (1-q_P)G$, this implies $0.5[q_P(Y-G) - q_D Y + (1-q_P)G] > (1-q_P)G$, which is equivalent to $q_P(Y-G) - q_D Y + (1-q_D)G > 2(1-q_P)G$. Rearrangement leads to $q_P(Y+G) > G + q_D(Y+G)$, implying case a), which excludes case b).

P's payoff is zero. Thus, any $\mu \in [0,1]$ is agreeable to P and F. The symmetric Nash bargaining solution predicts $\mu = 0.5$ as the agreement between P and F. Thus, the subgame perfect equilibrium path is:

$$(\text{contract with } \mu = 0.5, \text{ settlement with } \hat{S}_T).$$

Case e) In the final triangle labeled **e)**, the parties do not settle in either Game 1 or Game 2, but for different reasons. In Game 1, the parties do not settle since the trial has NEV. In Game 2, P would proceed to trial anyway (because the contract protects him from any trial cost). We have already demonstrated under case b) that, if the plaintiff proceeds to court in case a TPC contract is made, then there is no bilateral gain for F and P. Thus, the subgame perfect equilibrium path is:

$$(\text{no contract, no settlement, no trial}).$$

The above insights allow for the following conclusion:

> **Proposition 3:** In Game 2, a TPC contract will be agreed if, and only if, P and D come to a post-contract settlement in the subsequent game, i.e. in the areas c) and d) of Figure 5.

Thus, a TPC contract is part of the equilibrium if, and only if, the condition $q_P < q_D(Y+G)/Y$ holds. In this case, D and P come to a settlement result $\hat{S}_T$ which exceeds the settlement result without a contract: $\hat{S}$ in case c) and zero in case d). F and P may distribute this mutual gain by the agreed share for F, namely $\hat{\mu}$.

In area d), any share $\mu \in]0,1[$ is bilaterally beneficial. Thus, the predicted share for F is 0.5 and therefore independent of the parameters q_P, q_D, G and Y. In area c) however, the predicted share $\hat{\mu}$ depends on these parameters. A comparative static analysis of $\hat{\mu}$ demonstrates that it is decreasing in the plaintiff's subjective probability of prevailing, q_P, whereas it is increasing in q_D and G. Note that even a completely optimistic plaintiff (with $q_P = 1$) can benefit from making a TPC contract in order to increase his settlement result. Of course, this requires a sufficiently pessimistic defendant, i.e., $q_D > Y/(Y+G)$, since the parties would otherwise proceed to court. In a contract with a very optimistic plaintiff, the predicted share for F will be rather small.

Furthermore, note that whenever it is mutually beneficial for F and P to make a TPC contract, a settlement is triggered and F does not actually

have to bear the risk of having to pay litigation cost. Thus, the actual risk that F has to cover is zero, and any positive value of μ agreed between F and P would constitute "unfair insurance". However, in the current model, the TPC contract is not made to cover risks but to induce (or increase) a settlement.[22] This is the reason why the TPC contract is beneficial even for risk-neutral customers.

3 Discussion

3.1 Settlement before TPC contract: Game 3

In this section, we consider the possibility of entering a TPC contract after the pre-trial settlement negotiations have already begun. This is an option under many of the newly emerging after-the-event insurance arrangements. As we shall see for the class of arrangements under study, the outcome for F changes if potential customers are allowed to start settlement negotiations before agreeing a TPC contract.

Figure 6 shows the event tree of this new Game 3. First, the parties P and D bargain over a settlement. If they agree upon a payment, now denoted as T, then the payoffs for P, D, and F are $[\tilde{S}, -\tilde{S}, 0]$. If the parties fail to settle immediately, then they enter Game 2 as described in the previous section. Thus, Game 2 is now a subgame of Game 3, and was already shown to have five possible outcomes, represented by parameter combinations a) to e) above. In these cases, the parties would expect no TPC contract to be signed during the subsequent game if they fail to settle in the first place. Only c) and d) make a TPC contract feasible if the first-round settlement is not agreed upon. Therefore, only these parameter combinations require further analysis now.

These two sets of parameters are characterized by the condition $q_P < q_D(Y + G)/Y$. The equilibrium path in Game 2 includes a TPC contract and a settlement $\hat{S}_T$ (see Proposition 2). Given this subgame result, in Game 3 a settlement result during stage 1 is acceptable for D if $\tilde{S} < \hat{S}_T$, and for P if $\tilde{S} > (1 - \mu)\hat{S}_T$.

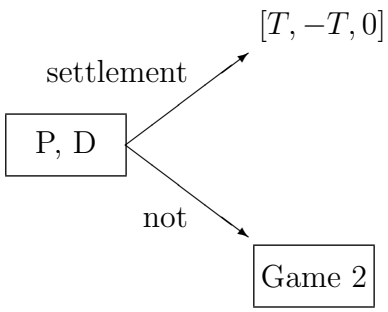
Thus, the bargaining range in this first stage of Game 3 is $](1 - \mu)\hat{S}_T, \hat{S}_T[$.

[22]Note that this analysis is based on the assumption that the amount at stake, Y, is exogenously given and constant. A higher amount at stake c.p. increases the number of combinations of q_P and q_D that lead to trial, whereas the settlement area shrinks.

This range is non-empty for any value of $\mu > 0$. Thus, the parties have an incentive to settle in the first place, without actually proceeding to the contract stage. Thus, it is the mere opportunity to make a TPC contract in the subsequent game which develops an impact on the parties' behavior.

Recall that, for the parameter values defining case d), without TPC contracts being available, the parties were confined to Game 1. In the parameter set d), the case would be dropped. In Game 3, the parties are motivated to settle the case. In case c), the parties would settle both in Game 3 and in Game 1. However, the gross settlement is increased. Again, the *threat* of a contract is sufficient to influence the behavior of the disputing parties. Without actually signing a TPC contract, its availability increases the settlement. However, F, whose existence plays an important role in Game 3, actually receives no business.[23]

Figure 6: Event tree of Game 3



3.2 Existence of a TPC contract as a signal

An interesting implication of our analysis involves the extent to which the existence of a contract should be revealed to an opposing litigant. We have noted that practice may differ across jurisdictions in this regard. However,

[23]Future work might usefully examine whether TPC contracts contain clauses restricting the amount or type of pre-contract negotiations that can have taken place prior to signing a contract.

in our model, the strategic effects we have derived are due to the defendant's awareness of the TPC agreement. This raises the interesting question of why suppliers of TPC contracts in Germany typically prevent this information from being divulged.

It is possible that an asymmetric information model of litigation would help illuminate this issue: the insurer may be happy to signal "good news" (case strength) but not "bad news" (if it has taken on a relatively weak case). A signaling model like Reinganum/Wilde (1986) would be a possible route for further research here.

We might furthermore ask whether a judge, modeled as a rational player, would be able to infer anything about the subjective beliefs of P (in the strength of his case) if he could observe a TPC contract. Bayesian update would require the judge no to know the actual values of q_P and $q_D\}$, but to assume a prior distribution. If the judge could make such an inference, then a clause protecting the presence of a TPC contract might make sense insofar as it protects the plaintiff from lowering his odds in court.

In the context of our model, the only cases that come before the judge at trial are those in which no TPC contract has been made. Thus, even if the existence of a TPC contract is revealed to the other side, this does not necessarily imply that the judge can see this particular information. This could be different if the judge adopted a more "pro-active" attitude to case management by even observing pre-trial settlement negotiations. If he were be able to observe the existence of a TPC contract, he may update his beliefs using Bayes' rule.

However, recall that the set of (q_P, q_D) combinations that leads to TPC contracts contains all q_P-types of plaintiffs (areas c) and d) in figure 5). Thus, even in this case, the judge could not infer with certainty the plaintiff's subjective probability of prevailing, q_P.

3.3 The impact of predetermined shares

So far, our analysis has sought situations in which F and P can agree a mutually beneficial contract (i.e. μ). We therefore have assumed that a suitable μ will be agreed endogenously. In fact, the standard contract issued by the originator of TPC arrangements (FORIS AG) fixes F's share in advance of such negotiations and, effectively, makes a "take-it-or-leave-it" contract offer of $\mu = 0.3$. How does this affect our analysis?

In the context of our model, this take-it or leave-it offer to potential clients imposes an additional constraint on the mutual gains from contracting. We have seen that cases c) and d) in Figure 5 are those where a TPC contract would be agreed and we can limit our analysis now to the former (recall that case d) would arise for any value of μ).

Case c) is characterized by the conditions $q_P < q_D(Y+G)/Y$ and $q_P > G/(Y+G)$. Recall that a TPC contract is bilaterally beneficial for F and P if the agreed share, μ, fulfills two conditions simultaneously: the contract is beneficial for F if $\mu > 0$, and it is beneficial for P if $\mu < \Delta\hat{S}/\hat{S}_T$.

Thus, a contract with an exogenously fixed share is always agreeable for F. P, however, will only agree to such a contract if the fixed share also holds the condition $\mu < \Delta\hat{S}/\hat{S}_T$. In our example with $\mu = 0.3$, this requires

$$\frac{\Delta\hat{S}}{\hat{S}_T} > 0.3$$

which is equivalent to

$$q_p < \frac{G}{0.3Y+G} + \frac{0.7G-0.3Y}{0.3Y+G}\ q_D \tag{9}$$

In Figure 7, this condition is represented by the area below the uppermost diagonal line starting at $q_P = G/(0.3Y+G)$. If this line intercepts the upper boundary of the square at a value of q_D which is smaller than $Y/(Y+G)$,i.e., in area a), then the extra constraint is non-binding - it does not affect area c). This happens when $2G > 3Y$, i.e. when the litigation costs are so large relative to potential winnings that F and P would be unable to agree a TPC contract anyway.[24]

The relevant cases are those with a smaller G, relative to Y, when the slope of the line is smaller. If $2G < 3Y$, this line divides area c) into two parts. Now, for parameter combinations in c) above the new line, a TCP contract

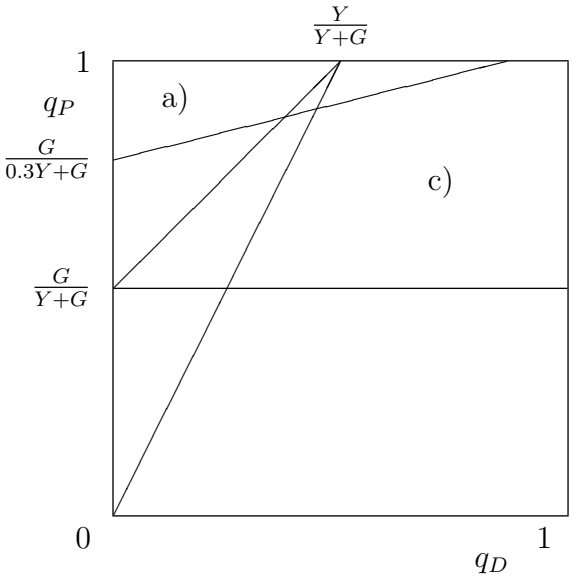
[24]The line then crosses the upper border in area a), to left of area c) if, for $q_P = 1$, the value of q_D is smaller than $Y/(Y+G)$. With $q_P = 1$, the equation of the diagonal line is equivalent to

$$q_D = \frac{0.3Y}{0.7G-0.3Y}$$

The right hand side of this equation is smaller than $Y/(Y+G)$ if $0.6Y^2 < 0.4GY$ or, equivalently, $2G > 3Y$. Note that Figure 7 also assumes that $6Y < 7G$, so the line crosses the upper border to left of $q_D = 1$. With $6Y > 7G$, the line would be flatter and would cross the right border of Figure 7.

with a fixed share of $\mu = 0.3$ is not beneficial for P, since condition (9) is violated. On the line and below, within area c), a TPC contract with a fixed share $\mu = 0.3$ would be beneficial for P, i.e., condition (9) holds.

Figure 7: Impact of a fixed share for F



3.4 Modifications

There are a number of other ways in which the model we have presented can be extended. To begin with, a class of economic models of pre-trial bargaining have, since Bebchuk (1984), assumed the presence of asymmetric information between the parties. This typically prevents cases from necessarily settling when gains from trade are present. Heyes/Rickman/Tzavara (2001) analyze such a model in the presence of Legal Cost Insurance and endogenous *ex ante* care levels, and it would be valuable to see how the current results carry over to that setting.

This would also allow for an analysis of how TPC contracts might affect the plaintiff's credibility constraint, as analyzed by Nalebuff (1987). One might also ask how a TPC contract affects the dynamics of settlement negotiations in a model such as Spier (1994) to examine the influence of contingent

fee contracts on the amount and timing of settlement.[25] It may also be fruitful to model the impact of TPC contracts on the incentives of attorneys that represent the parties.

The introduction of risk-aversion on the side of the plaintiff would alter some of our quantitative results, but the the current paper highlights how their strategic effect makes TPC contracts attractive even for risk-neutral customers. Insurance institutions do not only serve to solve problems of risk-allocation, but may also serve strategic goals, such as improving one's position in settlement negotiations, whether illiquid or otherwise.[26]

4 Conclusions

A number of institutional developments have taken place in recent times, concerning the way in which lawyers and courts can be paid in legal services markets across Europe. Although these developments are taking place with some speed, we have noted a general tendency for them to combine some form of result-contingent payment with insurance against cost. This third party element appears necessary to provide protection against the extra cost risk imposed by British cost rules.

We have modeled, for the first time, a particular class of such arrangements: the TPC contracts emerging in Germany; noting that these are also attracting interest elsewhere in Europe. Two effects of these contracts are highlighted by the model:

- First, their ability to add credibility to an otherwise weak (or low value) case, such that it becomes profitable for a plaintiff to threaten trial;
- Second, again by shielding the plaintiff against cost, their ability to increase (gross) settlements in the event of a negotiated settlement of the case;

Our model allows to derive the parameter constellations under which the litigants will settle their case as well as those parameter settings under which the case proceeds to trial. These predictions could be tested in a laboratory experiment.

[25] Rickman (1999) presents a dynamic model of pre-trial bargaining with contingent fees.

[26] See Kirstein (2000).

To the extent that these effects both occur in a model with risk neutral parties, they can be thought of as "strategic" effects. In principle, the strategic effect may be so strong that the mere threat of entering into such a contract can force settlement (at improved terms) in cases that would otherwise be dropped. Since, in this case, the TPC contract only serves as a credible threat and is not actually made, this would benefit the plaintiff, but not the third parties. One research question raised by our model is to what extent insurers restrict pre-contract negotiations between plaintiff and defendant (i.e., generate our Game 2 rather than Game 3).

Clearly, the ways in which result-contingent payment may be combined with British cost rules and (perhaps necessarily) Legal Costs Insurance has considerable potential for further economic analysis. What is more, there is evidence that such changes can have implications for other institutional elements of legal systems. In the case of the UK, Stanbury (2001) describes how insurers are beginning to monitor and challenge the bases on which costs are assessed, while Peysner (2001) notes that the British rule may itself be called into question if such mechanisms as those we have analyzed cannot be made to work. With some European countries seeking to reduce public expenditures on legal aid, and place more reliance on private insurance alternatives, the insights that economic analysis can generate are likely to inform an increasingly important policy debate.

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