

# The political economy of attorneys and human resources

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in Klaus F. Zimmermann, ed.,  
*Handbook of Labor, Human Resources and Population Economics*  
Cham, Switzerland: Springer Nature Switzerland AG, 2021.

## Abstract

This chapter reviews how attorney services and fees are affected by institutional elements such as remuneration systems, fee shifting rules, types of trial process, and discovery procedures. The institutional elements have evolved in line with changes in the political culture. This chapter introduces the political economy literature on public-policy determination. It then surveys the contest literature on litigation to illustrate a political game between two competing groups regarding remuneration systems. It argues that the introduction of the US-style fee system in Europe reflects a change in the political culture: political merits of contingent or conditional fees have become increasingly appreciated over their shortcomings. To describe the US-style fee system and to explore the driving force behind the change in the political culture, it develops two contest models of litigation.

*Keywords:* Political economy of attorney fees and services; Contingent and hourly fees; Effects of wealth and stake size; Attorneys' capacity

*JEL classification:* K41; K13; D72; J33

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## 1. Introduction

Attorneys and medical doctors are shining examples of professionals. They seek the honor and dignity of the profession while making money. Sometimes, however, the pursuit of the honor and dignity conflicts with individual financial gains. For instance, attorney advertising which may be necessary for new entrant attorneys to earn decent income by informing potential customers of their abilities has long been criticized as a means of pursuing self-interest.

In order to restore the profession's honor and dignity, the American Bar Association introduced the Professional Canon of Ethics in 1908, under which any form of advertisement except the distribution of business cards was prohibited until 1977 (see Stone and Miceli 2012; Friehe et al. 2020). A similar conflict has occurred in attorney fees, too (see Miceli 1994).

These kinds of conflicts and regulations are under the influence of legal institutions such as remuneration systems, fee shifting rules, types of trial process, discovery procedures, etc. There exists a large literature on these elements: see for example, Posner (1973), Tullock (1980), Katz (1987), Farmer and Pecorino (1999), Hirshleifer and Osborne (2001), Parisi (2002), Baik and Kim (2007a), Lambert and Chappe (2014), Baumann and Friehe (2016), and, more recently, Gabuthy and Lambert (2018), De Mot and Miceli (2019), and Friehe and Wohlschlegel (2019).

This chapter first reviews each of the institutional elements. The way of charging legal expenses affects the number of lawsuits and thus the volume of attorney services. Under the American fee-shifting rule, each party pays only her own litigation costs including attorney fees, regardless of whether she wins or loses. (Throughout the chapter, "she" means a litigant, and "he" means an attorney.) In contrast, under the English (or British) rule, the loser bears the winner's litigation costs (see Farmer and Pecorino 1999). Compared to the American rule, the English rule seems to contribute more to reducing the number of lawsuits and thus the volume of attorney services.

The types of trial process also affect the volume of attorney services: either inquisitorial procedure or adversarial procedure. The inquisitorial procedure in Europe allows that the court (or the chief judge) is actively involved in investigating the facts of the case. On the other hand, the adversarial procedure in the USA is proceeded mostly through arguments among attorneys while the judge takes the role of impartial referee. The adversarial procedure requires more legal efforts than the inquisitorial procedure (see Parisi 2002). Critics of the adversarial system worry that a litigant's probability to prevail in a lawsuit may rely more upon the capacity of her attorney than on the facts of the case, and thus, the rich can buy justice, as compared to the inquisitorial system where the chief judge dominates the trial. The political economy of the inquisitorial system emphasizes the idea of preventing the rich from gaining advantage over the poor in litigation. However, this is true only when there is a presumption that the judge is a fair referee.

Information asymmetry between a plaintiff and a defendant makes it hard to settle with each other. For instance, the plaintiff may have better information about the damages he has suffered than the defendant, whereas the defendant may be more knowledgeable about his culpability. A discovery process as a pre-trial procedure is prepared to mitigate the information asymmetry (see Baumann and Friehe 2016). Different countries have different procedural laws that stipulate the discovery process, which affects the volume of attorney services.

The main objective of the chapter is to analyze the introduction of contingent fees – "no win, no fee" – in Europe, given these institutional factors. Contingent-fee contracts prevail in the USA, and they are frequently blamed for encouraging frivolous lawsuits and thus incurring too much social costs. In contrast, contingent fees were banned for a long time in Europe since *pactum de quota litis* was not allowed by the ethical restrictions of the European Association of Lawyers (see Emons and Garoupa 2006). *Pactum de quota litis* is an agreement entered between a creditor and a third person with regard to recovery of a debt. Even, in the USA, ethical restrictions based on the ABA

Model Rules of Professional Conduct prevent an attorney from "purchasing" a client's legal claim to recover damages in a civil suit. The ethical rules of Europe and the USA seem to be driven by positive political behavior. However, Santore and Viard (2001) provide a different political economy explanation for the positive political behavior: the prohibition of a 100 percent contingent fee and a negative fixed fee can be understood as a means of maintaining rents for members of the legal profession.

Banning contingent fees may stir up a fairness issue: poor litigants who cannot afford litigation costs are obliged to give up lawsuits. To deal with this problem institutionally, most European countries encourage people to use legal expenses insurance. However, what should they do with indigent litigants who cannot even get the insurance? The only last way an indigent litigant can get help is through legal aid from the government. Although legal aid is positive political behavior, it is increasingly criticized politically because of high and increasing public spending (see Lambert and Chappe 2014).

From a social welfare perspective, it may be desirable to discourage frivolous suits by banning contingent fees. From the litigants' or attorneys' point of view, however, it is better to maximize their gains through a successful remuneration system. Their desire and the criticism of increased public spending for legal aid work as political and market pressure. Because of such pressure, the type of attorney fees has been changing rapidly all over Europe, clearly following the US-style fee system where litigants can choose between the contingent and the hourly fee. The UK started introducing conditional fees in the 1990s followed by Belgium and the Netherlands. Under the conditional fee arrangement, the plaintiff's attorney receives hourly fees plus a bonus if a recovery is obtained by his client and nothing if the case is lost. Both contingent and conditional fees pay for performance, however, the former provides a percentage of the trial award while the latter provides a reward unrelated to the recovery amount. Spain, France, Italy, and Portugal have also been considering the introduction of conditional fees. Even Germany has

relaxed restrictions on attorney fees by means of third party contingent contracts (see Emons and Garoupa 2006).

The change in attorney fee systems in Europe can be modeled as a political game between two contesting groups. Namely, one group that defends the status quo of the ethical restrictions of the European Association of Lawyers and the other group that challenges it by fighting for the US-style fee system. This approach resembles that in Epstein and Nitzan (2004, 2007) who provide a positive economic theory of public-policy determination. Their theory has spawned a series of studies, including Münster (2006), Epstein and Mealem (2009), Epstein et al. (2011), and Cardona and Rubi-Barcelo (2016). Münster (2006) analyzes how opposing lobbyists moderate the degree of competition by precommitting to certain policy proposals. Epstein and Mealem (2009) study a situation in which a status quo policy is challenged by one interest group and defended by the other. Epstein et al. (2011) argue that political considerations shape a specific political culture. They define the political culture as the weights assigned to challengers and status quo defenders. Cardona and Rubi-Barcelo (2016) show that some concessions in making policy proposals may not result in strategic restraints.

The change in attorney fee systems reflects a change in a political culture: political merits of the US-style fee system have become increasingly appreciated over their shortcomings. Why would the challenging contingent or conditional fees be given a higher weight than the status quo hourly fees? As explained earlier, one reason is the demand for reducing the budget for legal aid, and the other is that litigants and their attorneys believe that contingent or conditional fees may bring them more gains than hourly fees. The demand and belief influence the political culture. To explore whether the belief is correct or not, this chapter shall develop two models of litigation contests and compare them.

A contest is defined as a situation in which contestants compete with one another by expending irreversible effort to win a prize. As mentioned in Epstein and Nitzan (2004), lobbying activities, patent races, sports, tournaments, conflict and struggles over

monopoly status, minimum wage negotiation, environmental policy, and trade policy are typical examples of contests. A contest model is also appropriate for a description of litigation since a plaintiff and a defendant expend irreversible litigation effort to prevail in their case. Moreover, it allows to investigate strategic interactions between the two sides. Because of such merits, contest models have long been considered to analyze legal disputes. Examples of litigation contests include Plott (1987), Farmer and Pecorino (1999), Hirshleifer and Osborne (2001), Baik and Kim (2007a, b), De Mot and Miceli (2019), and Friehe and Wohlschlegel (2019). Parisi and Luppi (2015) provide a succinct but comprehensive review in which they classify applications of the rent-seeking contest model to litigation into several topics such as adversarial and inquisitorial procedures, fee-shifting, consolidation, bifurcation of trials, tort liability, etc.

This chapter introduces the literature of the effects of litigants' wealth and stake size on compensation schemes which have not been analyzed yet in the literature of litigation contests. Does money buy justice in the US justice system? The murder trial of O.J. Simpson, often characterized as being the "Trial of the Century," may shed light on this question. When it comes to criminal justice, the answer to the question is probably yes. Simpson's army of able attorneys, called the "Dream Team" in the media, made the criminal jury was unable to find beyond a reasonable doubt that he committed murder in the first degree. By contrast, it does not seem that the rich can buy civil justice. Simpson's legal team failed to stop the plaintiff's attorneys from convincing the civil jury by the preponderance of evidence that he was liable for the wrongful death of his former wife and her friend. Hunt (1999) provides a comprehensive review of the O.J. Simpson trial.

Why is there such discrepancy between the criminal and the civil justice, as shown in the Simpson case? An obvious explanation for the discrepancy is due to the difference in the level of the burden of proof between criminal and civil cases. To prove allegations in criminal cases, the highest level of the burden of proof is required, called "proof beyond a reasonable doubt." In contrast, civil cases require the lowest level, called "by the

preponderance of the evidence," which merely requires that the matter asserted seem more likely true than not. Thus, in February 1997, the civil jury could find Simpson liable for the wrongful death, whereas not guilty in the criminal court in October 1995.

This chapter seeks another explanation for the discrepancy: in civil cases, stake size does matter. In order to prevail in a civil case, it is important for a litigant to hire high-capacity attorneys. This is especially true in the adversarial system of litigation. The chapter argues that the bigger the stake size of the case, the greater the capacity (or quality) of a plaintiff's attorney under a contingent-fee arrangement. For instance, Simpson, the defendant in the civil court, was ordered to pay \$33,500,000 in damages. Though the plaintiff is poor, expectations of such damages could attract able attorneys to her side. This means that the advantage of high-capacity attorneys is not necessarily with a wealthy defendant if stake size is big enough.

To investigate the effects of litigants' wealth and stake size on litigation outcomes, this chapter assumes that the probability of winning for a litigant depends on opposing attorneys' relative capacity and effort levels. A novelty of the chapter is an introduction of attorneys as delegates. See Baik and Kim (1997), Konrad et al. (2004), Katz (2006), and Baik and Kim (2007a, b) for delegation in contests. In terms of institutional classification in Parisi and Luppi (2015), the models in this chapter adopt the adversarial procedure and the American rule of fee-shifting. In the models, a litigant with more wealth has better access to the pool of high-capacity attorneys than her opponent with less wealth, given the stake size. Similarly, given the wealth level, the greater the stake size, the higher the capacity of attorneys available for the litigants.

The chapter first considers a model – called the contingent-fee model – in which the plaintiff retains her attorney on a contingent-fee basis and the defendant does on an hourly-fee basis. In the USA, most tort plaintiffs file suit under a contingent-fee arrangement. Kritzer (1990) reports that 87 % of individual plaintiffs in torts retain their lawyers on a contingent-fee scheme. On the other hand, most plaintiffs in divorce adopt an

hourly-fee scheme. Defendants' attorneys both in torts and divorce are usually paid under an hourly fee (see Bebachuk and Guzman 1996; Kritzer 2002; Emons 2007). Many law and economics scholars study contingent fees. Examples include Danzon (1983), Dana and Spier (1993), Rubinfeld and Scotchmer (1993), Miceli (1994), Zamir and Ritov (2010), and Baumann and Friehe (2016). This chapter does not consider conditional fees since contingent and conditional fees are similar in that both fees pay for performance.

The chapter next considers another model – called the hourly-fee model – in which the plaintiff as well as the defendant adopts the hourly fee. This game runs as follows. In the first stage, each litigant hires her attorney and writes a contract with him. The contract specifies the attorney's hourly fee rate. Then, the litigants simultaneously announce their attorneys' capacity and their contracts. In the second stage, litigants 1 and 2 choose simultaneously the effort levels which attorneys 1 and 2 will expend, respectively, and then the attorneys expend their effort. At the end of the second stage, the winner is determined, and each litigant pays compensation to her attorney according to the contracts written in the first stage.

The chapter proceeds as follows. Section 2 develops the contingent-fee model in which the plaintiff's attorney works under the contingent fee and the defendant's attorney works under the hourly fee. Section 3 considers the hourly fee model in which both attorneys work under the hourly fee. Varying stake size, Section 4 compares the outcomes from the two models. Section 5 offers a summary and concluding remarks of the chapter.

## **2. The model of contingent-fee attorneys**

Consider a tort litigation in which a plaintiff seeks compensation for damages from a defendant. If the plaintiff wins the lawsuit, she receives a judgment (or stake)  $V$  from the defendant. On the other hand, if the plaintiff loses it – that is, if the defendant wins it – she receives nothing from the defendant. The litigants bear their own litigation costs,

regardless of the outcome of the lawsuit. This chapter models the litigation as a contest in which the two litigants compete to win a prize of  $V$ .

The litigants each hire an attorney who exerts effort on her behalf. Let the plaintiff be litigant 1, and let the defendant be litigant 2. The attorney hired by litigant 1 is called attorney 1, and the attorney hired by litigant 2 is called attorney 2. Reflecting typical compensation structures for tort cases in the USA, it is assumed in this section that attorney 1 is hired on a contingent-fee basis – so comes the title of the section – but attorney 2 is hired on an hourly fee basis. Usually, in tort cases, defendants are large insurance companies, whereas plaintiffs are individuals who may not have enough wealth to hire attorneys under the hourly fee. The insurance companies mostly use in-house attorneys on the hourly fee basis or get contracts with large law firms on the hourly fee basis. Garoupa and Gomez-Pomar (2008) argue that large law firms also seem to prefer the hourly fee over the contingent fee. Attorney 1 in the chapter is paid a fee that is set as a fixed percentage of  $V$  if litigant 1 wins the lawsuit, and nothing if she loses it. On the other hand, attorney 2 is paid a fee which depends on his capacity and effort level, regardless of the outcome of the lawsuit.

Let  $x_i$  represent the effort level expended by attorney  $i$ ,  $i = 1, 2$ . Effort levels are nonnegative and are measured in temporal units. Let  $p_i$  be the probability that attorney  $i$  (or litigant  $i$ ) wins. Then,  $p_2 = 1 - p_1$ . Following Tullock (1980), the litigation success function for attorney 1 is given by

$$p_1 = \begin{cases} \sigma_1 x_1 / (\sigma_1 x_1 + \sigma_2 x_2) & \text{for } x_1 + x_2 > 0 \\ 1/2 & \text{for } x_1 + x_2 = 0, \end{cases} \quad (1)$$

where  $\sigma_i$  indicates attorney  $i$ 's capacity (or ability) for the litigation,  $i = 1, 2$ . The logit-form probability-of-winning functions as in (1) are widely used in the litigation contest literature. See, for example, Posner (1973), Plott (1987), Farmer and Pecorino (1999), Hirshleifer and Osborne (2001), and Parisi (2002). Katz (1987) reports that in the USA,

legal fees of plaintiffs on average are about one fourth of the amount at stake. Interestingly, Baik and Kim (2007a, b) and the model in this chapter show that, in equilibrium, a litigant's legal fee is about one fourth of  $V$ . Function (1) implies two things. First, the litigants have the same degree of fault regarding the case: if  $x_1 = x_2$  and  $\sigma_1 = \sigma_2$ , then attorney 1's probability of winning equals one half. Second,  $\sigma_i > \sigma_j$  implies that attorney  $i$  has more capacity than attorney  $j$ : if  $x_1 = x_2$ , then attorney  $i$ 's probability of winning is greater than one half. (Throughout the chapter, when  $i$  and  $j$  are used at the same time, it means that  $i \neq j, i, j = 1, 2$ .) The attorneys' litigation success functions have the property that, given attorney  $j$ 's positive effort level, attorney  $i$ 's probability of winning is increasing in his effort level at a decreasing rate. They have also the property that, given his positive effort level, attorney  $i$ 's probability of winning is decreasing in attorney  $j$ 's effort level at a decreasing rate.

For each capacity level, there exist at least two attorneys of the capacity. The litigants know which attorney has what capacity. Litigant  $i$  hires an attorney whose capacity lies in the real interval  $[1, \bar{\sigma}_i]$ , where  $\bar{\sigma}_i > 1$ : in terms of the symbols,  $\sigma_i \in [1, \bar{\sigma}_i]$ . As explained earlier, a plaintiff (litigant 1) is often an individual, while a defendant (litigant 2) is usually a firm that has a deep pocket. Based on this fact, it is assumed that  $\bar{\sigma}_1 \leq \bar{\sigma}_2$ . For concise exposition, let  $\bar{\sigma}_1 = \bar{\sigma}$  and  $\bar{\sigma}_2 = \alpha\bar{\sigma}$ , where  $\alpha \geq 1$ . It is also assumed that the value of  $\bar{\sigma}_i$  is determined by both the value of  $V$  and litigant  $i$ 's wealth level. Note that given  $i$ 's wealth, an increase in  $V$  raises her expected payoff, which in turn enhances her financial ability to hire better attorneys under the hourly fee scheme. Similarly, under the contingent fee, an increase in  $V$  entices better attorneys to work for litigant 1.

If attorney 1 wins the lawsuit, his contingent fee is  $\beta_1 V$ , where  $0 < \beta_1 < 1$ . The parameter  $\beta_1$  is determined by the contract between litigant 1 and attorney 1. Attorney 2's hourly fee rate is assumed to equal his capacity,  $\sigma_2$ . Litigant 1 does not monitor attorney 1's effort level. This is because the fee is paid only if she wins the case. However, litigant

2 may have to incur some monitoring costs in order to deal with attorney 2's possible moral hazard. It is assumed that if litigant 2 asks attorney 2 to expend an effort level of  $x_2$ , then she must expend a monitoring cost of  $\delta x_2$ , where  $\delta > 0$ . It is also assumed that  $\delta$  is exogenously given and publicly known. Note that if litigant 2 asks attorney 2 to expend more effort, then she must incur more monitoring costs. Thus, if litigant 2 asks attorney 2 to expend an effort level of  $x_2$ , then she must expend a total amount of  $(\sigma_2 + \delta)x_2$ .

It is assumed that the litigants and attorneys are risk-neutral and try to maximize their expected payoffs. Let  $\pi_i$  represent the expected payoff for attorney  $i$  and  $\Pi_i$  the expected payoff for litigant  $i$ . Then the payoff function for attorney 1 is

$$\pi_1 = p_1\beta_1V - x_1. \quad (2)$$

A rent is allowed for each attorney by assuming that he incurs a real cost of 1 per unit of his effort; thus, the higher attorney  $i$ 's capacity, the more his rent. The payoff function for attorney 2 of capacity  $\sigma_2$  is  $\pi_2 = (\sigma_2 - 1)x_2 \geq 0$ . The payoff function for litigant 1 is

$$\Pi_1 = p_1(1 - \beta_1)V, \quad (3)$$

and that for litigant 2 is

$$\Pi_2 = (1 - p_1)V - (\sigma_2 + \delta)x_2. \quad (4)$$

This chapter formally considers the following two-stage game. In the first stage, each litigant hires her attorney – that is, litigant  $i$  chooses  $\sigma_i$ . Litigant 1 writes a contract with attorney 1, which specifies the contingent-fee parameter  $\beta_1$ . Litigant 2 writes a contract with attorney 2, which specifies attorney 2's hourly fee rate. Recall that attorney 2's hourly fee rate is assumed to equal his capacity,  $\sigma_2$ . Then, the litigants simultaneously announce their attorneys' capacity and their contracts – that is, litigant 1 announces publicly the value of  $\sigma_1$  and the value of  $\beta_1$ , and litigant 2 announces publicly the value of  $\sigma_2$ . In the second stage, attorney 1 and litigant 2 choose simultaneously the effort levels

which attorneys 1 and 2 will expend, respectively, and then the attorneys expend their effort. Note that, since attorney 2 is hired on an hourly fee basis, it is litigant 2 who chooses attorney 2's effort level. Fershtman and Kalai (1997) distinguish between two types of delegation: incentive and instructive delegation. According to their classification, litigant 1 adopts incentive delegation, while litigant 2 adopts instructive delegation. At the end of the second stage, the winner is determined, and each litigant pays compensation to her attorney according to the contracts written in the first stage.

Finally, it is assumed that all of the above is common knowledge among the litigants and attorneys. A subgame-perfect equilibrium is used as the solution concept.

### 2.1. The second stage of the game

To solve for a subgame-perfect equilibrium of the two-stage game, consider first the second stage. In the second stage, values of  $\sigma_1$ ,  $\sigma_2$  and  $\beta_1$  are publicly known. Attorney 1 seeks to maximize his payoff (2) over his effort level, taking attorney 2's effort level as given. Litigant 2 seeks to maximize her payoff (4) over attorney 2's effort level, taking attorney 1's effort level as given. Each maximization problem yields a reaction function. From the two reaction functions, then, a unique Nash equilibrium of the second-stage subgame is obtained. It is denoted by  $(x_1(\beta_1, \sigma_1, \sigma_2), x_2(\beta_1, \sigma_1, \sigma_2))$  and reported in Lemma 1.

**Lemma 1.** *The Nash equilibrium is  $x_1(\beta_1, \sigma_1, \sigma_2) = \beta_1^2(\sigma_2 + \delta)\sigma_1\sigma_2V / \{\beta_1(\sigma_2 + \delta)\sigma_1 + \sigma_2\}^2$  and  $x_2(\beta_1, \sigma_1, \sigma_2) = \beta_1\sigma_1\sigma_2V / \{\beta_1(\sigma_2 + \delta)\sigma_1 + \sigma_2\}^2$ .*

Let  $p_1(\beta_1, \sigma_1, \sigma_2)$  be the probability that attorney 1 wins at the Nash equilibrium of the second stage. From expression (1) and Lemma 1, it is obtained

$$p_1(\beta_1, \sigma_1, \sigma_2) = \beta_1(\sigma_2 + \delta)\sigma_1 / \{\beta_1(\sigma_2 + \delta)\sigma_1 + \sigma_2\}. \quad (5)$$

From expressions (3) and (5), the expected payoff of litigant 1 at the Nash equilibrium of the second stage is obtained:

$$\Pi_1(\beta_1, \sigma_1, \sigma_2) = \beta_1(1 - \beta_1)(\sigma_2 + \delta)\sigma_1 V / \{\beta_1(\sigma_2 + \delta)\sigma_1 + \sigma_2\}. \quad (6)$$

Similarly, from expressions (4) and (5), the expected payoff of litigant 2 at the Nash equilibrium of the second stage is obtained:

$$\Pi_2(\beta_1, \sigma_1, \sigma_2) = \sigma_2^2 V / \{\beta_1(\sigma_2 + \delta)\sigma_1 + \sigma_2\}^2. \quad (7)$$

## 2.2. The first stage of the game

Consider the first stage in which each litigant hires her attorney and writes a contract with him. Specifically, in the first stage, litigant 1 chooses the value of  $\sigma_1$  and the value of  $\beta_1$ , and litigant 2 chooses the value of  $\sigma_2$ .

First consider litigant 1. Taking a value of  $\sigma_2$  as given, litigant 1 seeks to maximize her expected payoff (6) over  $\sigma_1$  and  $\beta_1$ . From the first-order condition for maximizing (6) over  $\beta_1$ , the following reaction function is obtained:

$$\beta_1(\sigma_1, \sigma_2) = [\{\sigma_2^2 + (\sigma_2 + \delta)\sigma_1\sigma_2\}^{1/2} - \sigma_2] / (\sigma_2 + \delta)\sigma_1. \quad (8)$$

Substituting (8) into (6) yields:

$$\Pi_1(\sigma_1, \sigma_2) = [(\sigma_2 + \delta)\sigma_1 + 2\sigma_2 - 2\{\sigma_2^2 + (\sigma_2 + \delta)\sigma_1\sigma_2\}^{1/2}]V / (\sigma_2 + \delta)\sigma_1.$$

Partially differentiating  $\Pi_1(\sigma_1, \sigma_2)$  with respect to  $\sigma_1$ , it obtains  $\partial\Pi_1(\sigma_1, \sigma_2) / \partial\sigma_1 > 0$ .

Next, consider litigant 2. Litigant 2 chooses  $\sigma_2$  without observing  $\sigma_1$  and  $\beta_1$ . Thus litigant 2 seeks to maximize her expected payoff (7) over  $\sigma_2$ , given a value of  $\sigma_1$  and a value of  $\beta_1$ . Partially differentiating  $\Pi_2(\beta_1, \sigma_1, \sigma_2)$  in (7) with respect to  $\sigma_2$ , it obtains  $\partial\Pi_2(\beta_1, \sigma_1, \sigma_2) / \partial\sigma_2 > 0$ .

Lemma 2 reports each litigant's choice of her attorney's capacity in equilibrium.

**Lemma 2.** *Litigant  $i$ 's expected payoff is monotonically increasing in  $\sigma_i$ : in terms of the symbols,  $\partial\Pi_1(\sigma_1, \sigma_2)/\partial\sigma_1 > 0$  and  $\partial\Pi_2(\beta_1, \sigma_1, \sigma_2)/\partial\sigma_2 > 0$ . Therefore, in equilibrium, litigant 1 chooses an attorney of capacity  $\bar{\sigma}$ , and litigant 2 chooses an attorney of capacity  $\alpha\bar{\sigma}$ : in terms of the symbols,  $\sigma_1^* = \bar{\sigma}$  and  $\sigma_2^* = \alpha\bar{\sigma}$ .*

The first part of Lemma 2 says that, given the capacity of the opponent's attorney, each litigant's expected payoff increases as she hires an attorney of higher capacity. The explanation is rather straightforward. Consider first litigant 1. Her payoff function can be written as  $\Pi_1(\sigma_1, \sigma_2) = p_1(\sigma_1, \sigma_2)\{1 - \beta_1(\sigma_1, \sigma_2)\}V$ , which comes from expression (3). By hiring an abler attorney, she can lower the contingent-fee fraction and increase her probability of winning, which certainly increases her expected payoff. In terms of the symbols,  $\partial\beta_1(\sigma_1, \sigma_2)/\partial\sigma_1 < 0$  and  $\partial p_1(\sigma_1, \sigma_2)/\partial\sigma_1 > 0$ , where  $p_1(\sigma_1, \sigma_2) = 1 - \sigma_2/\{\sigma_2^2 + (\sigma_2 + \delta)\sigma_1\sigma_2\}^{1/2}$ .

Note that it obtains  $p_1(\sigma_1, \sigma_2)$  by substituting (8) into (5). Next, from expression (4), litigant 2's payoff function is  $\Pi_2(\beta_1, \sigma_1, \sigma_2) = \{1 - p_1(\beta_1, \sigma_1, \sigma_2)\}V - (\sigma_2 + \delta)x_2(\beta_1, \sigma_1, \sigma_2)$ . Hiring an abler attorney increases litigant 2's probability of winning and thus her gross expected payoff,  $\{1 - p_1(\beta_1, \sigma_1, \sigma_2)\}V$ . On the other hand, hiring an abler attorney either increases or decreases her costs,  $(\sigma_2 + \delta)x_2(\beta_1, \sigma_1, \sigma_2)$ . But the former positive effect on her expected payoff dominates the latter negative effect, if any. Therefore, litigant 2's expected payoff increases as she hires an abler attorney. Lemma 2 implies that, in order to maximize her expected payoff, each litigant has to hire the best of the available attorneys she can afford.

Lemma 2 and expression (8), then, yield the equilibrium contingent-fee parameter:

$$\beta_1^* = [\{\alpha^2\bar{\sigma}^2 + \alpha(\alpha\bar{\sigma} + \delta)\bar{\sigma}^2\}^{1/2} - \alpha\bar{\sigma}]/(\alpha\bar{\sigma} + \delta)\bar{\sigma}. \quad (9)$$

Now, Lemmas 1 and 2, together with expressions (6), (7), and (9), yield Lemma 3. It reports the attorneys' effort levels and the litigants' expected payoffs which are specified in the subgame-perfect equilibrium of the two-stage game.

**Lemma 3.** *In the subgame-perfect equilibrium, the effort levels of attorneys 1 and 2 are  $x_1^* = [\{\alpha(\alpha + \alpha\bar{\sigma} + \delta)\}^{1/2} - \alpha]^2 V / (\alpha\bar{\sigma} + \delta)(\alpha + \alpha\bar{\sigma} + \delta)$  and  $x_2^* = [\{\alpha(\alpha + \alpha\bar{\sigma} + \delta)\}^{1/2} - \alpha] V / (\alpha\bar{\sigma} + \delta)(\alpha + \alpha\bar{\sigma} + \delta)$ , and the expected payoffs of litigants 1 and 2 are  $\Pi_1^* = \{(\alpha + \alpha\bar{\sigma} + \delta)^{1/2} - \alpha^{1/2}\}^2 V / (\alpha\bar{\sigma} + \delta)$  and  $\Pi_2^* = \alpha V / (\alpha + \alpha\bar{\sigma} + \delta)$ .*

### 3. The model of hourly fee attorneys

This section assumes that both attorney 1 and attorney 2 are hired on an hourly fee basis. This compensation structure is widely used in the USA for civil cases such as divorce and contract disputes. Each attorney is paid a fee which depends on his capacity and effort level, regardless of the outcome of the lawsuit. This hourly fee model looks at the following two-stage game. In the first stage, each litigant hires her attorney – that is, litigant  $i$  chooses  $\sigma_i$  – and writes a contract with him. The contract specifies the attorney's hourly fee rate. Then, the litigants simultaneously announce their attorneys' capacity and their contracts – that is, litigant 1 announces publicly the value of  $\sigma_1$  and litigant 2 announces publicly the value of  $\sigma_2$ . In the second stage, litigants 1 and 2 choose simultaneously the effort levels which attorneys 1 and 2 will expend, respectively, and then the attorneys expend their effort. At the end of the second stage, the winner is determined, and each litigant pays compensation to her attorney according to the contracts written in the first stage.

Let  $\hat{\Pi}_i$  represent the expected payoff for litigant  $i$ . Then, the payoff function for litigant 1 is

$$\hat{\Pi}_1 = p_1 V - (\sigma_1 + \delta)x_1,$$

and that for litigant 2 is

$$\hat{\Pi}_2 = (1 - p_1)V - (\sigma_2 + \delta)x_2,$$

where  $p_1$  is defined by expression (1).

To solve for a subgame-perfect equilibrium of the two-stage game, consider first the second stage, and then the first stage. Since the analysis of this game is similar to that of the contingent-fee model in Section 2, it reports the results without explaining the analysis in detail. Lemma 4 reports the Nash equilibrium of the second-stage subgame.

**Lemma 4.** *The Nash equilibrium is  $\hat{x}_1(\sigma_1, \sigma_2) = (\sigma_2 + \delta)\sigma_1\sigma_2V / \{2\sigma_1\sigma_2 + \delta(\sigma_1 + \sigma_2)\}^2$  and  $\hat{x}_2(\sigma_1, \sigma_2) = (\sigma_1 + \delta)\sigma_1\sigma_2V / \{2\sigma_1\sigma_2 + \delta(\sigma_1 + \sigma_2)\}^2$ .*

As in Lemma 2,  $\hat{\Pi}_i(\sigma_1, \sigma_2)$  is monotonically increasing in  $\sigma_i$ : in terms of the symbols,  $\partial\hat{\Pi}_1(\sigma_1, \sigma_2)/\partial\sigma_1 > 0$  and  $\partial\hat{\Pi}_2(\sigma_1, \sigma_2)/\partial\sigma_2 > 0$ . Thus, litigant 1 chooses an attorney of capacity  $\bar{\sigma}_1$  and litigant 2 chooses an attorney of capacity  $\bar{\sigma}_2$  in equilibrium: in terms of the symbols,  $\hat{\sigma}_1^* = \bar{\sigma}_1 = \bar{\sigma}$  and  $\hat{\sigma}_2^* = \bar{\sigma}_2 = \alpha\bar{\sigma}$ . This, together with Lemma 4, yields Lemma 5, which reports the attorneys' effort levels and the litigants' expected payoffs in the subgame-perfect equilibrium of the full game.

**Lemma 5.** *In the subgame-perfect equilibrium, the effort levels of attorneys 1 and 2 are  $\hat{x}_1^* = \alpha(\alpha\bar{\sigma} + \delta)V / \{2\alpha\bar{\sigma} + (\alpha + \delta)\}^2$  and  $\hat{x}_2^* = \alpha(\bar{\sigma} + \delta)V / \{2\alpha\bar{\sigma} + (\alpha + \delta)\}^2$ , and the expected payoffs of litigants 1 and 2 are  $\hat{\Pi}_1^* = [(\alpha\bar{\sigma} + \delta) / \{2\alpha\bar{\sigma} + (1 + \alpha)\delta\}]^2 V$  and  $\hat{\Pi}_2^* = [\alpha(\bar{\sigma} + \delta) / \{2\alpha\bar{\sigma} + (1 + \alpha)\delta\}]^2 V$ .*

#### 4. The effects of wealth and stake size

This chapter now investigates how an increase in  $\alpha$  (the wealth parameter) affects the litigants' equilibrium payoffs in the contingent-fee and the hourly fee model. In doing

so, it begins with a situation in which the value of  $\bar{\sigma}$  depends solely on the size of  $V$ . Put differently, it is assumed that under the contingent fee, litigant 1's decision on the capacity of attorney 1 at the beginning point is not affected by her wealth but by the size of  $V$ .

**Proposition 1.** *Fix the level of  $\bar{\sigma}$  and  $\delta$ . Then,  $\Pi_1^*(\alpha)$  and  $\hat{\Pi}_1^*(\alpha)$  are monotonically decreasing in  $\alpha$ , and  $\Pi_2^*(\alpha)$  and  $\hat{\Pi}_2^*(\alpha)$  are monotonically increasing in  $\alpha$ . The rate of decrease and increase is very small, compared with the increasing rate of  $\alpha$ . This means that the wealth effects on the litigants' equilibrium payoffs are very small.*

Proposition 1 is illustrated in Figures 1 and 2. The values of  $\Pi_1^*$  and  $\Pi_2^*$  are increasing and decreasing in  $\bar{\sigma}$ , respectively. If  $\bar{\sigma} \geq 2.29$ , the initial value of  $\Pi_1^*$  at  $V$  becomes to exceed that of  $\Pi_2^*$  (refer to Figure 1). (Throughout the chapter, most decimal fractions are rounded off to two decimals, but some decimal fractions to four decimals if necessary.) Throughout the chapter, in numerical examples, the value of  $\delta$  is equal to 0.1. The value of  $\delta$  may be interpreted as a possible overcharge rate. To be specific, attorney  $i$  could overcharge his hourly fee by an amount of  $\delta x_i$ , exploiting his informational advantage on  $x_i$ . Interestingly, Kritzer (1990, pp. 135-61) reports that, on average, hourly fee attorneys spent 49.5 hours and contingent-fee attorneys 45.7 hours in civil litigation in the USA. If the difference in hours spent is interpreted as the overcharge, then  $\delta = (49.5 - 45.7)/45.7 = 0.08$ , which is close to 0.1. Figures 1 and 2 show how an increase in  $\alpha$  affects  $\Pi_i^*(\alpha)$  and  $\hat{\Pi}_i^*(\alpha)$  when  $\bar{\sigma} = 2$  and  $\delta = 0.1$ . As the value of  $\alpha$  increases five times, the litigants' expected payoffs show only a small change of  $0.01V$ . It is easy and intuitive to see that  $\partial\Pi_1^*(\alpha)/\partial\alpha < 0$ ,  $\partial\hat{\Pi}_1^*(\alpha)/\partial\alpha < 0$ ,  $\partial\Pi_2^*(\alpha)/\partial\alpha > 0$ , and  $\partial\hat{\Pi}_2^*(\alpha)/\partial\alpha > 0$ . However, the reason why the rate of decrease and increase is so small needs an explanation. The explanation is based on the litigants' strategic and payoff-maximizing behavior. Expression (1) implies that an increase in  $\alpha$  enhances litigant 2's probability of winning and thus her gross expected payoff,  $(1 - p_1)V$  in (4). At the same

time, however, it also raises her costs because the hourly fee rate is equal to her attorney's capacity and is increasing in  $\alpha$  (see (4) and Lemma 2). Moreover, it could make attorney 1 in the contingent-fee model or litigant 1 in the hourly fee model aggressive, which in turn may lower litigant 2's expected payoff. Realizing such costs and strategic interactions, in equilibrium, litigant 2 with a high  $\alpha$  makes attorney 2 less aggressive by asking him to work less. In the meantime, a decrease in attorney 1's effort level is small. Let us take some numerical examples. When  $\bar{\sigma} = 2$  and  $\delta = 0.1$ , for instance,  $\hat{x}_2^* = 0.0807V$  with  $\alpha = 1$  and  $\hat{x}_2^* = 0.0167V$  with  $\alpha = 5$ . That is, as the value of  $\alpha$  increases five times, attorney 2's equilibrium effort level decreases by about 80%. However, there is only a small decrease in attorney 1's effort level. Specifically,  $\hat{x}_1^* = 0.0807V$  with  $\alpha = 1$  and  $\hat{x}_1^* = 0.0802V$  with  $\alpha = 5$ . Because of such strategic consideration, the wealth effects on the litigants' expected payoffs are not so great. Strategic restraint in Epstein and Nitzan (2004, 2007) applies here.

How does litigant 1's choice of a fee arrangement change the wealth effect on herself? In terms of absolute values, her choice produces little difference. When  $\bar{\sigma} = 2$  and  $\delta = 0.1$ , for instance,  $\Pi_1^*(\alpha = 1) - \Pi_1^*(\alpha = 5) = 0.0061V$  and  $\hat{\Pi}_1^*(\alpha = 1) - \hat{\Pi}_1^*(\alpha = 5) = 0.0097V$ . The two numerical values show, however, the wealth effects in the contingent-fee model are relatively greater than those in the hourly fee model. This can be explained as follows. When  $\alpha$  increases, by adopting the contingent fee, litigant 1 can drive attorney 1 more strongly to win the lawsuit so that she can reduce the gap in the payoffs.

Until now, the amount at stake,  $V$ , has assumed to be fixed. It now varies the value of  $V$ . It is very likely that  $\bar{\sigma}$  and  $\alpha\bar{\sigma}$  rise in proportion to the size of  $V$ . This is because an increase in  $V$  raises the litigants' expected payoffs, which in turn enhances their financial ability to hire better attorneys under the hourly fee. Under the contingent fee, an increase in  $V$  entices better attorneys to work for litigant 1. For the sake of analytical simplicity, it assumes a linear relationship between  $V$  and  $\bar{\sigma}$ : to be specific,  $\bar{\sigma} = sV$ , where  $s$  is a positive

constant. It also assumes that  $\alpha$  is independent of  $V$ . It is not clear whether  $\alpha$  in reality is increasing or decreasing in  $V$ . Substituting  $\bar{\sigma}/s$  for  $V$  in Lemmas 3 and 5, it obtains Proposition 2.

**Proposition 2.** *Fix the level of  $\alpha$ ,  $\delta$ , and  $s$ . Then, the marginal effect of increasing  $V$  over attorney 1's effort is higher under the contingent fee than it is under the hourly fee. The marginal effect of attorney 1's is also higher than that of attorney 2's. Thus, if the initial effort level of attorney 1 under the contingent fee is lower than that of himself under the hourly fee or that of attorney 2, then a reversal of the effort levels occurs as  $V$  increases.*

Proposition 2 is illustrated in Figures 3 and 4. In Proposition 2, Corollary 1, and Figures 3, 4, 5, and 6,  $V$  is used instead of  $\bar{\sigma}/s$ , though it obtains the results by substituting  $\bar{\sigma}/s$  for  $V$ . This is possible because both the independent and dependent variables in Proposition 2 and Corollary 1 include  $\bar{\sigma}/s$ , and thus, it re-substitutes  $V$  for  $\bar{\sigma}/s$ . In Figure 3,  $\alpha = 2$  and  $\delta = 0.1$ , and in Figure 4,  $\alpha = 1$  and  $\delta = 0.1$ . The figures show how an increase in  $V$  changes the attorneys' equilibrium effort levels in units commensurate with  $V$ . First, in the hourly fee model, given  $\alpha$  and  $\delta$ ,  $\partial \hat{x}_i^* / \partial \bar{\sigma} > 0$ : as in Katz (1988), it is intuitive that given  $s$ , an increase in  $\bar{\sigma}$  (via an increase in  $V$ ) leads both attorneys to increase their effort levels.

Second, in the contingent-fee model, given  $\alpha$  and  $\delta$ ,  $\partial x_1^* / \partial \bar{\sigma} > 0$ , which is also intuitive. But it is somewhat counterintuitive that the sign of  $\partial x_2^* / \partial \bar{\sigma}$  is indeterminate. As shown in Figure 3, for instance,  $x_2^*$  is initially increasing in  $V$  but very slowly compared with the increase in  $x_1^*$ ; it reaches its maximum  $0.12V$  at  $3.13V$ ; then it is very slowly decreasing in  $V$ . Why does this happen? Recall that, in the contingent-fee model, litigant 1 adopts incentive delegation with the contingent fee, whereas litigant 2 instructive delegation with the hourly fee. Given attorney 1's effort level, if litigant 2 has attorney 2 with a higher  $\bar{\sigma}$  put more effort, her winning probability goes up and so does her gross

expected payoff. At the same time, however, it raises her expenses of hourly fees which are increasing in  $\bar{\sigma}$  and in  $x_2^*$ . Moreover, the increase in  $x_2^*$  may make attorney 1 under the contingent fee more aggressive. Considering such cost effects and strategic interactions, litigant 2 determines attorney 2's effort level in order to maximize her expected payoff. This results in  $x_2^*$  in Figure 3.

Figure 3 shows a reversal of the effort levels caused by a different increasing rate of effort of the two attorneys when  $V$  increases. Figure 4 also shows a similar reversal of attorney 1's effort levels caused by the different fee schemes. To see such a reversal empirically, Kritzer (1990, pp. 118-120) takes hypothetical cases and systematically varies the level of stakes. Figure 8-1 in Kritzer (1990) shows that the reversal occurs at about \$40,000, though he does not distinguish between the contingent-fee and the hourly fee model. This chapter conjectures, however, that Figure 4 fits his idea better than Figure 3 does. This is because Figure 4 deals with a difference in the same attorney's effort levels when the fee scheme is changed and when there is no wealth effect. If this is the case,  $1.67V$  in Figure 4 corresponds to about \$40,000 in Kritzer (1990). On the other hand, Figure 3 deals with a difference in the effort levels of the two different attorneys under the different fee schemes. The chapter thus concludes that Proposition 2 with Figure 4 may provide a theoretical foundation for the reversal of the effort levels in Kritzer (1990). The explanation for the rationale utilizes the fact that when  $V$  increases, the contingent fee makes attorney 1 more aggressive than the hourly fee does.

Next, the chapter investigates how an increase in  $V$  affects the litigants' equilibrium payoffs in each model. Together with the probability-of-winning function (1), Proposition 2 leads to Corollary 1.

**Corollary 1.** *Fix the level of  $\alpha$ ,  $\delta$ , and  $s$ . Then, the marginal effect of increasing  $V$  over litigant 1's expected payoff is greater under the contingent fee than it is under the hourly fee. The marginal effect of litigant 1's is also greater than that of litigant 2's. Thus, if*

*litigant 1's initial payoff with the contingent fee is less than that of herself or that of litigant 2's, then a reversal of the payoffs occurs as  $V$  increases.*

Corollary 1 is illustrated in Figures 5 and 6. In Figure 5,  $\alpha = 2$  and  $\delta = 0.1$ , which corresponds to Figure 3, and in Figure 6,  $\alpha = 1$  and  $\delta = 0.1$ , which corresponds to Figure 4. As  $V$  increases, the equilibrium effort ratio  $x_1^*/x_2^*$  or  $x_1^*/\hat{x}_1^*$  increases, shown in Proposition 2. This means that litigant 1's probability of winning with the contingent fee increases. Consequently, as  $V$  increases, the increasing rate of  $\Pi_1^*$  exceeds that of  $\Pi_2^*$  or that of  $\hat{\Pi}_1^*$ .

Corollary 1 implies that when the stake size is getting bigger, litigant 1's choice of the contingent fee could become a better choice, compared with her choice of the hourly fee. In Figure 6, for example, litigant 1's expected payoff with the contingent fee exceeds her payoff with the hourly fee at  $1.68V$ . The analysis has an important policy implication: as plaintiffs want to choose between the contingent and the hourly fee, they are likely to exert political influence to change the political culture of attorney fees in Europe. It also has a policy implication for the recent tobacco litigation in the USA. State governments as plaintiffs filed lawsuits against tobacco companies seeking reimbursement for medical expenses paid by government insurance agencies attributed to tobacco-related illness. In November 1998, the four major tobacco companies (Philip Morris, R.J. Reynolds, Lorillard, and Brown & Williamson) and the attorney general reached the Master Settlement Agreement, under which the companies agreed to pay 46 states about \$206 billion over the next 25 years. The companies settled separately with the four remaining states (Florida, Minnesota, Mississippi, and Texas). See Sloan et al. (2005) who provide a succinct review of the recent wave of tobacco litigation. In the tobacco litigation, the states retained private attorneys under the contingent fee, though they were able to afford salaried attorneys for the litigation. As the contingent-fee attorneys earned \$10 or 20 billion, criticism against the state governments has arisen. Corollary 1 with Figure 6 says,

however, that the governments' choice of the contingent fee should not be criticized economically if the public wanted the governments to maximize the reimbursement. Corollary 1 with Figure 5 also says that if stake size is big enough, a plaintiff's winning probability in expression (1) with the contingent fee exceeds that of a defendant with the hourly fee. This may explain the defeat of O.J. Simpson in his civil case.

## **5. Summary**

This chapter has reviewed how attorney services and fees are affected by institutional elements such as remuneration systems, fee shifting rules, types of trial process, and discovery procedures. It has also argued that the introduction of the US-style fee system in Europe reflects a change in a political culture: political merits of contingent or conditional fees have become increasingly appreciated over their shortcomings. To explore the driving force behind the change in the political culture, it has developed two models of litigation and compared them. In the contingent-fee model, the plaintiff hires her attorney on a contingent-fee basis, but the defendant does on an hourly fee basis. In the hourly fee model, both attorneys work under the hourly fee. The chapter has proved that as stake size increases, the plaintiff can take advantage of the contingent fee which motivates her attorney more strongly to win the case. In doing so, the models have followed a contest approach.

Contest models are apt to describe the circumstances of legal disputes since litigants compete with each other by expending irreversible effort to win the stakes of the case. Many scholars have used the contest models to analyze several issues in legal disputes. As mentioned in Parisi and Luppi (2015), however, some topics such as the role of burden of proof and its relationship to litigation effort have yet remained underexplored. The wealth effect in litigation is also remained largely unexplored. This chapter has found that each litigant hires the best of the available attorneys she can afford; thus, the wealthier

a litigant, the abler her attorney. Because of strategic interactions, however, the defendant's wealth contributes only a little to an increase in her expected payoff.

In his seminal work, Galanter (1974) proposes that the "haves" (the rich in this chapter) achieve more favorable outcomes in litigation. The haves in his paper, e.g. insurance companies, are financially and organizationally stronger parties, compared to the have-nots. The haves are repeat litigants in litigation, whereas the have-nots are one-shotters. Due to such merits, the haves tend to prevail in litigation, which is empirically supported by a number of scholars (see, for example, Wheeler et al. 1987; Songer et al. 1999). This chapter has proved that, in accordance with Galanter's proposition, a wealthy litigant can maintain the advantage in terms of expected payoffs. The numerical examples in the chapter show, however, that the advantage is not so great. If the model could consider the issue of repeat litigants, the level of the advantage would become greater. It leaves such an extension for future research.

## **Cross-References**

Leadership and Delegation of Authority (in Behavioral Economics)

The Political Economy of Prestige and Earnings

(in Political Economy (of Human Resources))

Tournaments and Competition (in Behavioral Economics)

Wealth Inequalities (in Inequality and Poverty)

## **Acknowledgments**

Responsible Section Editor: Gil S. Epstein

This article has benefited from valuable comments of the editors and anonymous referees. It has also benefited from helpful comments and discussions of Jacques Crémer, Young Gyu Kim, Myung Ock Lee, and Julian Park. An earlier version of this chapter was presented at the first conference of the Asian Law and Economics Association. There is no conflict of interest.

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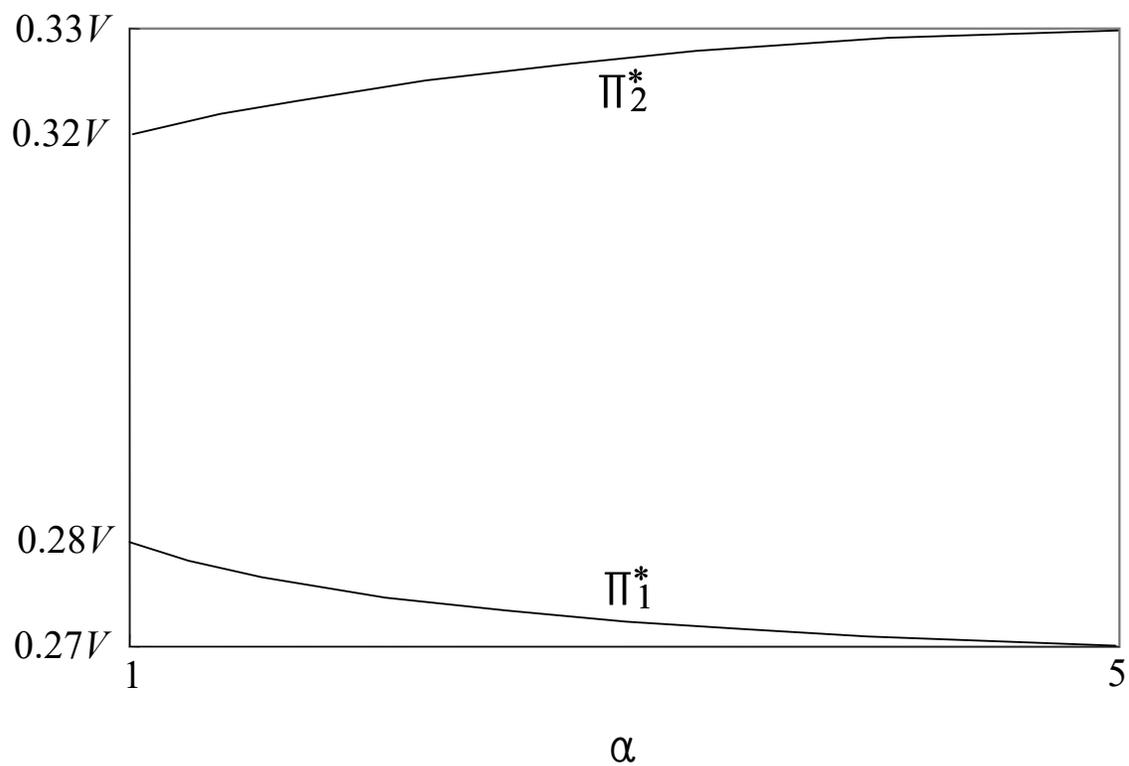
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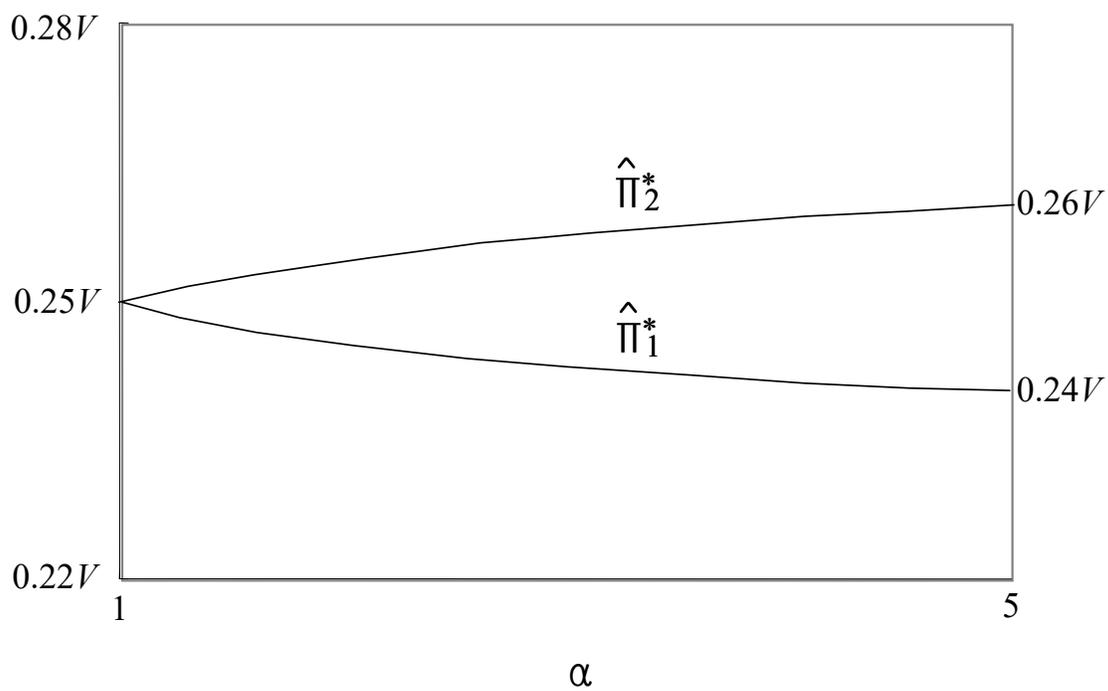
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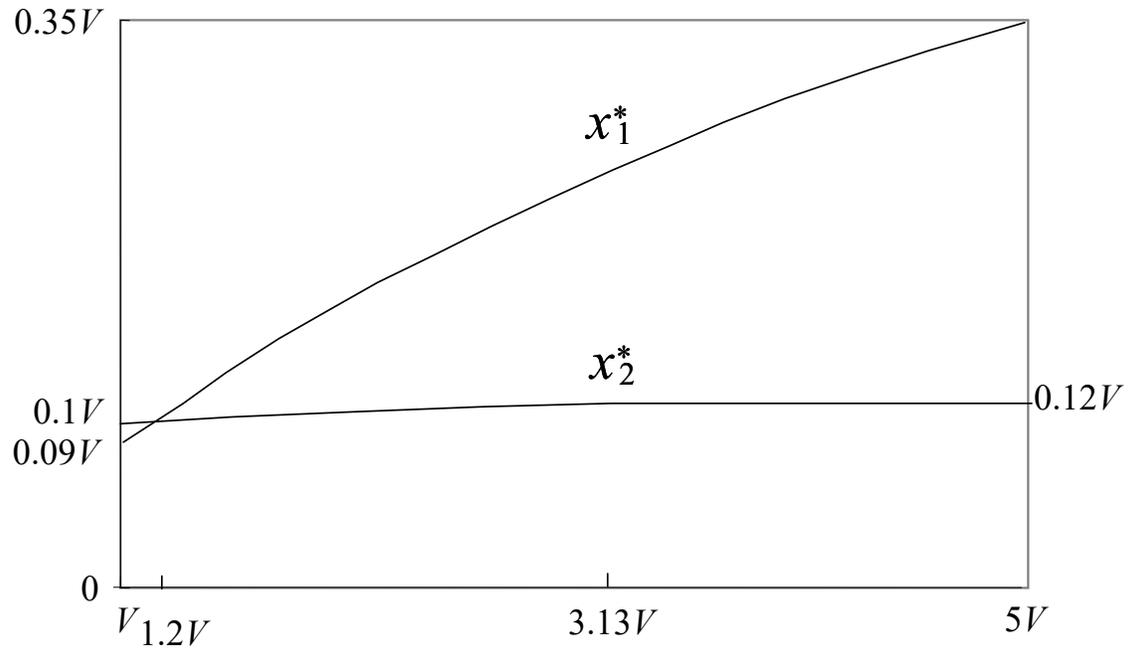
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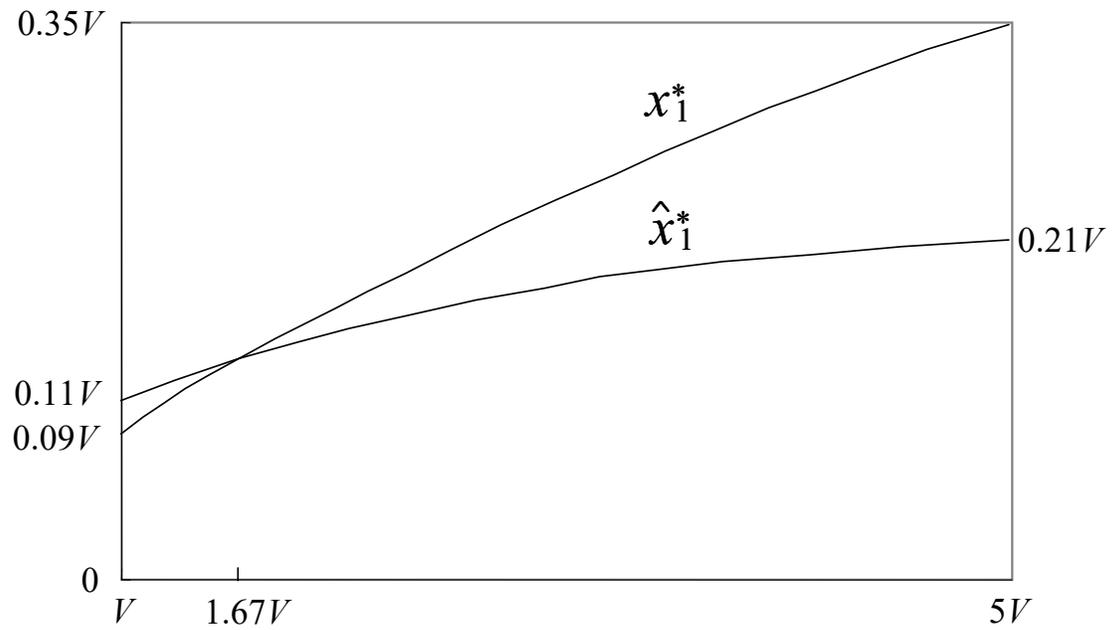
**Figure 1** The wealth effects on  $\Pi_i^*$  in the contingent-fee model when  $\bar{\sigma} = 2$



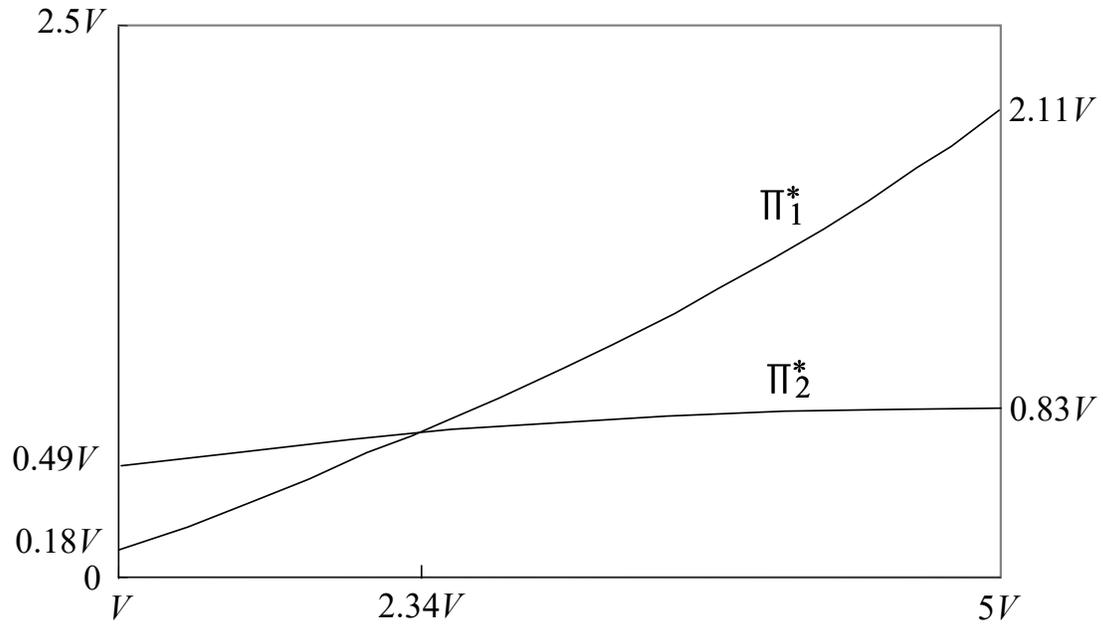
**Figure 2** The wealth effects on  $\hat{\Pi}_i^*$  in the hourly fee model when  $\bar{\sigma} = 2$



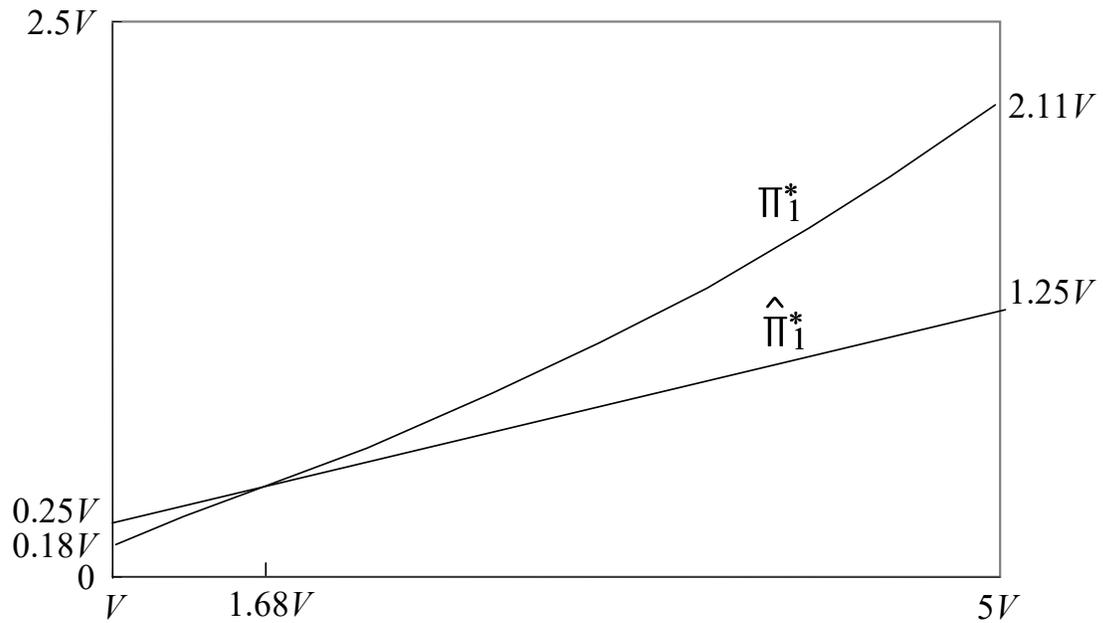
**Figure 3** A reversal of effort levels in the contingent-fee model when  $\alpha = 2$



**Figure 4** A reversal of attorney 1's effort levels in the two models when  $\alpha = 1$



**Figure 5** The effects of stake size on  $\Pi_i^*$  in the contingent-fee model when  $\alpha = 2$



**Figure 6** The effects of stake size on  $\Pi_1^*$  and  $\hat{\Pi}_1^*$  when  $\alpha = 1$