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RETAINING COUNSEL: THE TIPPING POINT EFFECT

Retaining Counsel: The Tipping Point Effect*

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Abstract

A real-world puzzle has eluded the attention of scholars and policymakers. Using unique data sets covering more than 8 million civil lawsuits in mainland China, Taiwan, and Japan, we observe that parties are often *pro se* even when high amounts of money are at stake. One (partial) explanation could be a "tipping point effect": parties are more inclined to be represented by an attorney if they expect the case to be a close call – and less inclined if they believe the odds of winning to be very high or very low. We support the tipping point effect in survey experiments framed as litigation. If the otherwise identical experiment is an unframed lottery, the effect disappears. Based on this evidence, we argue that the effect results from the combination of two behavioral effects: reference point dependence, and competitive spirit.

Keywords: pro se, attorney representation, reference point dependence, the near miss effect, anticipated regret, framing, competitive spirit

JEL: C91, D86, D91, K41

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I. Why are *pro se* procedures so frequent?

Professional advice is costly. But professional advice may also improve the odds of winning in court. Hence the decision to seek professional counseling is an investment decision. A litigant just interested in profit should engage in cost-benefit analysis, working out her subjective estimate of winning, the expected gains from winning, the subjective estimate of increasing the odds of winning with the help of a professional litigator, and the additional cost. The decision would follow from this straight-forward mathematical exercise.

The law and economics literature has been interested in a related, but different, question. It also starts from the observation that litigation is costly. Yet if the parties to a potential dispute hold correct beliefs about the likely outcome, they can save the litigation cost by settling the case. From this perspective, litigation should only be expected if reasonable parties can disagree about the odds of winning, i.e. in close cases (Priest and Klein 1984; Klerman and Lee 2014). Prior beliefs could, however, diverge so deeply that even cases with low objective odds of winning are litigated (Helland, Klerman, and Lee 2018). Moreover, the parties could have incentives outside the dispute for not settling the case (Chang and Hubbard 2019; Hubbard 2019; Chang and Hubbard 2021). We, by contrast, are interested in the choice of professional representation *if* there is a trial.

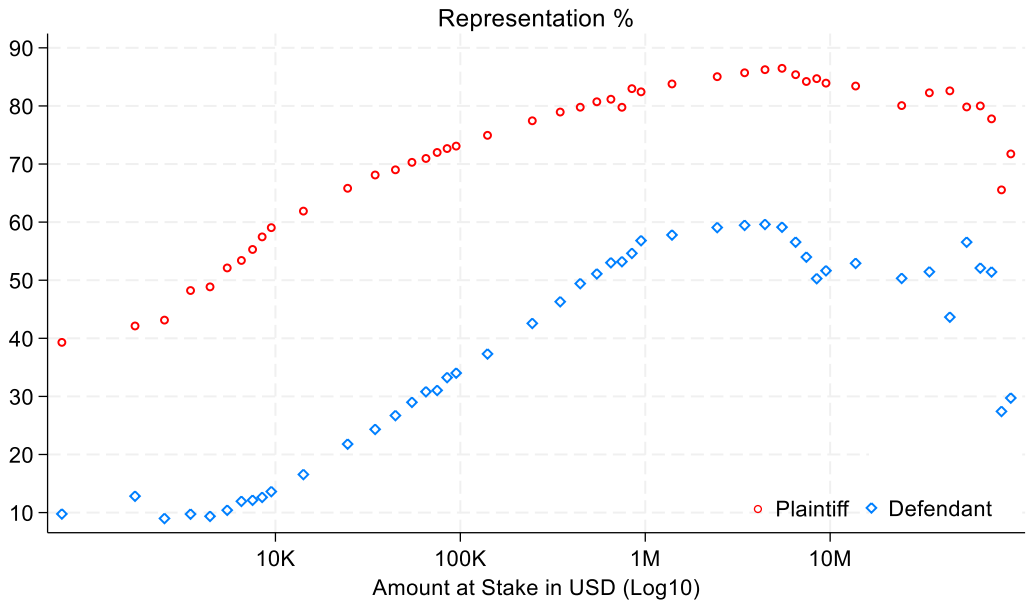
It has long been observed that the actual involvement of attorneys looks very different from the theoretical prediction. On average, *pro se* procedures are so frequent that one would need implausibly low estimates of success to rationalize them as profit maximizing choices. Along these lines, the task force to expand access to legal services under the auspices of the Chief Justice of New York has found that those at or below 200 per cent of the official poverty level only seek legal redress in 20 per cent of the cases that would call for it.[1] Prior literature on the 'haves' versus 'have nots' has explained this finding with a budget constraint (Galanter 1974; Dotan 1999; Smyth 2000; Gilad 2010; He and Su 2013; Chen, Huang, and Lin 2015). The answer, simply put, is that some litigants cannot afford to hire attorneys. It has also been suggested that for persons with little education, there might be a psychological barrier. Would-be plaintiffs might reason: This is not for people like me. If I were to go to court, I would enter a domain where I do not belong. I would be outside my comfort zone. This is not my way of solving conflicts. I don't feel entitled to go to court. Filing a claim does not feel quite right. I do not trust this context (cf. Bar-Gill and Engel 2016; Balmer and Pleasence 2019; Niesiobędzka and Kołodziej 2019; Kroeper et al. 2020).

Given this state of the art, the data from mainland China, Taiwan and Japan represented in Figures 1-3 creates a puzzle. Professional representation is less frequent with small claims. This is consistent with both the wealth and the class explanations. But in all three jurisdictions, a fair number of litigants with high-stake claims, even claims in the order of 1 million dollars, are *pro se* as well. These observations can only be rationalized if there are additional reasons why litigants refrain from seeking professional representation. We cannot exclude that some of the litigants had in-house legal expertise. But we consider it unlikely that this is a sufficient

1 State of New York, 'The Task Force to Expand Access to Civil Lega; Services in New York' <http://www.nycourts.gov/accesstojusticecommission/PDF/CLS-TaskForceReport_2013.pdf>.

explanation, especially because our data on mainland China and Taiwan include only disputes between individuals, excluding those involving legal persons such as companies. Neither could the lack of representation be attributed to the fact that a big chunk of the docket is debt collection cases. As further shown in Figure A. 1 and Figure A. 2, even when omitting debt collection cases, a significant portion of the plaintiffs and defendants in China and Taiwan were still *pro se* in high-stake cases. Note that in all three jurisdictions, the stake is the amount of plaintiffs' claims, and the plaintiffs' claims are not groundless, as the court filing fees, which plaintiffs have to pay in advance, are proportionate to the amount of plaintiffs' claims (Chang and Klerman 2022: 118–119, 130, 148). In all the three jurisdictions we study, whether a party is represented by an attorney is recorded at the conclusion of the cases by the courts. The representation information should be fairly accurate. In addition, in all three jurisdictions, contingent fee is allowed but rare. Outside of corporate practice (i.e., in the disputes between one natural person against another), most attorneys charge a flat fee (Chang and Tu 2020). Hence, our data sets on more than 8 million civil lawsuits strongly suggest that, at least in these jurisdictions where more than 1.5 billion people reside, many high-stake litigants have been also unrepresented.

Figure 1 Representation Rate by Stake, Mainland China 2014–2020

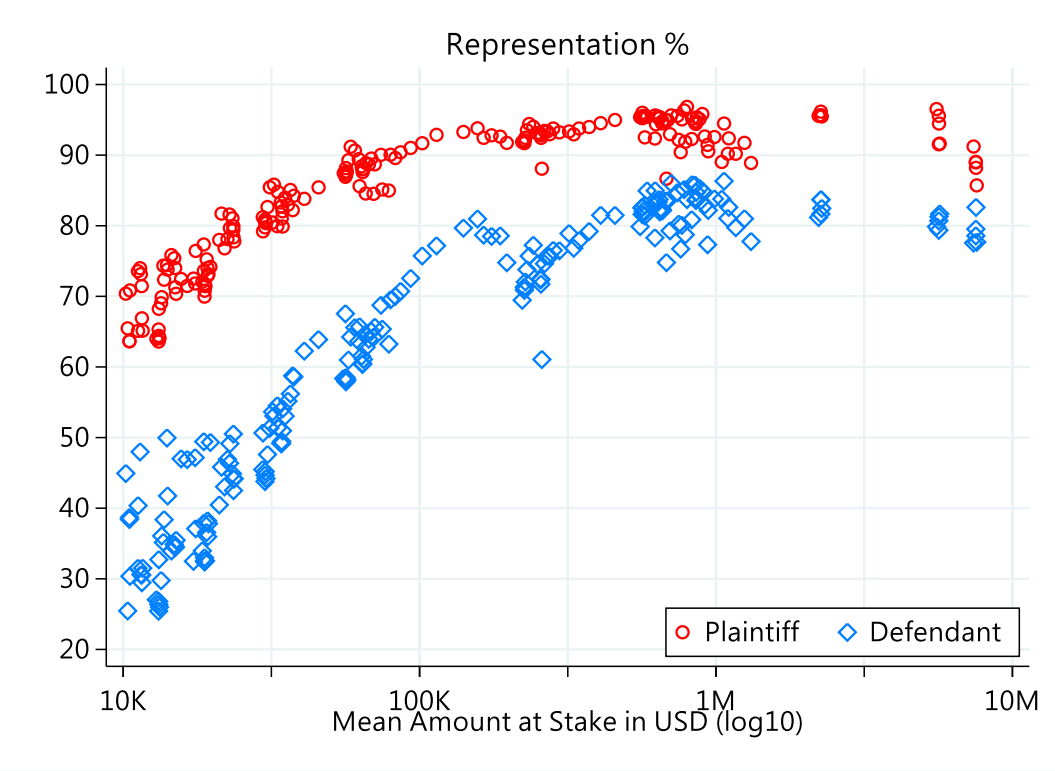


Notes: N=5,177,891. The mainland China data are at the individual case level. We limited the sample used in this figure to (1) lawsuits between natural persons and (2) lawsuits resolved in substantive court judgments (rather than settlement, withdrawal, or procedural dismissals) between January 1, 2014 and December 31, 2020. The stakes in all cases have been first adjusted by Consumer Price Index (CPI) to 2023 real RMB Yuan, then converted to U.S. Dollars with the exchange rate of 1 USD = 7.104 RMB Yuan (the exchange rate as of December 31, 2023, per U.S. Treasury, https://fiscaldata.treasury.gov/currency-exchange-rates-converter/). The X-axis uses a $\log_{10}$ scale. $\log_{10}(1000)=3$, $\log_{10}(10000)=4$, and so on. The X-axis is labelled with the un-logged amount.

Figure 2 Representation Rate by Stake, Taiwan 2002–2019

Notes: N=213,048. The Taiwan data are at the individual case level (that is, the amount at stake in all cases and whether plaintiffs and defendants in all cases are represented were recorded). We limited the sample used in this figure to (1) lawsuits between natural persons and (2) lawsuits resolved in substantive court judgments (rather than settlement, withdrawal, or procedural dismissals) between January 1, 2002 and June 30, 2019 in a court of first instance that applied ordinary procedure (rather than summary or small-claim procedures, meaning that only cases with approximately 16,000 USD or more at stake were included). We created this binscatter plot that divides the sample into 50 bins each for plaintiffs and defendants. The stakes in all cases have been first adjusted by Consumer Price Index (CPI) to 2023 real Taiwan Dollars, then converted to U.S. Dollars with the exchange rate of 1 USD = 30.641 TWD (the exchange rate as of December 31, 2023, per U.S. Treasury, https://fiscaldata.treasury.gov/currency-exchange-rates-converter/). https://fiscaldata.treasury.gov/currency-exchange-rates-converter/). The X-axis uses a $\log_{10}$ scale. $\log_{10}(1000)=3$, $\log_{10}(10000)=4$, and so on. The X-axis is labelled with the un-logged amount.

Figure 3 Representation Rate by Stake, Japan 1968–1997



Notes: N=2,929,095. The Japan data are aggregate data. The Judicial Yearbooks of Japan in 1968–1997 each year divide all cases into several categories by stakes. The lowest and highest boundaries of each category (always big, round numbers) are given in the yearbook. There are in total 205 categories. Within each category, statistics are provided on the number of cases in which plaintiffs and/or defendants were represented. Due to the aggregate nature of the data, we are unable to limit the sample to cases in which only natural persons were involved. In this scatterplot, we first computed the "mean" stake by simply summing up the lowest and highest boundaries of each category and dividing the summation by two. The highest stake category in each year has no upper boundary, so we used the lowest boundary as the "mean" stake. Then we converted this "mean" stake to 2023 Japanese Yen by the Consumer Price Index (CPI, per World Bank) and finally converted the real average stakes to U.S. Dollars with the exchange rate of 1 USD = 141.47 JPY (the exchange rate as of December 31, 2023, per U.S. Treasury, https://fiscaldata.treasury.gov/currency-exchange-rates-converter/). Only CPI-adjusted stakes that are larger than 1000 USD after conversion are included, to be more comparable with other jurisdictions. As the categories are determined by the editors of the judicial yearbooks in Japan and divided by round numbers (the nominal boundaries also vary over the years), the number of cases in each category vary. To reduce visual clutter, we do not include weights in the markers. Generally, the categories with the highest and lowest stakes have the fewest observations. https://fiscaldata.treasury.gov/currency-exchange-rates-converter/). The X-axis uses a $\log_{10}$ scale. $\log_{10}(1000)=3$, $\log_{10}(10000)=4$, and so on. The X-axis is labelled with the un-logged amount.

In this paper, we offer an additional, behavioral reason, and test it experimentally. We hypothesize that litigants are unlikely to invest in professional representation if they consider the odds of winning to be near either end of the distribution. They might not deem it worth the while to seek professional advice if their prior of winning is either very low or very high. By implication, the propensity to pay for a lawyer should (only) be higher if the case is perceived to be a close call. If plaintiffs or defendants expect that the outcome of the case is fairly clear, they would not throw good money after bad, or they would not make the extra investment if they anyhow expect to win. This asymmetry could consistently explain hesitance to hire a lawyer if priors are not near the midpoint. We call the hypothesized effect a tipping point effect.

II. Why might parties be hesitant to invest in professional representation if the case is not a close call?

Typically, experimenters must decide: do they want to test an effect, or do they want to identify the mental mechanism that leads to an effect that has been documented before? In this paper, we have settled for the former approach. We have pre-registered the hypothesis of a tipping point effect. We thus predict that the probability of hiring a legal representative is higher if the odds of winning are close to 50-50, compared with the odds either being very low or very high. We do not claim that we can conclusively define the mechanism that leads to this effect. Nonetheless, in this section, we explain mental mechanisms that can (and that cannot) rationalize the effect. By introducing two supplementary conditions, we narrow down the set of plausible explanations. Still the eventual discrimination between these explanations must be reserved for future work.

A litigant aiming to maximize profit should not be more likely to hire a lawyer if they perceive the case to be a close call. The primary concern should be the cost and the expected benefit. It could, of course, be that the same combination of skills and effort of the representative does not yield the same advantage in terms of the posterior odds of winning; in real life, a tipping point effect could arise from the increased effectiveness of professional advice in close-call cases.. In our experiment, we exclude this potential confound by holding the benefit constant. Regardless of the prior odds, and at the same cost, the odds of winning increase by the same amount if the participant hires a lawyer.

Unless the perceived odds of winning are 100%, the litigant faces risk. Risk aversion might explain why a litigant refrains from going to court in the first place. It is also conceivable that a litigant engages in mental accounting (Thaler 1999; Rockenbach 2004) puts additional weight on the risk of investing into representation, and loses regardless. But risk aversion alone cannot explain that litigants are less likely to invest if they do not perceive the case to be close to 50-50. In particular, risk aversion cannot explain that they are less likely to invest if they perceive the odds of winning to be very high.

A court case adds an additional dimension. It results from the adversarial nature of trial. By design, one party's gain is the other party's loss. Hence, litigation puts the parties into a competitive mindset. Competition has the potential to unleash a destructive motive. Destructive

acts directed against competitors have often been documented. Participants are willing to pay for manipulating the ranking to their advantage, or for reducing the performance of their competitors (Charness, Masclet, and Villeval 2014). Participants are more willing to destroy some of their competitors' income if they exclusively compete with those whom they can target, compared to a design where they could also be outperformed by participants who are immune to their intervention (Barker and Barclay 2016). Participants seize the opportunity to destroy some of their competitors' assets before the competition starts (Harbring et al. 2007; Amegashie 2012; Balafoutas, Lindner, and Sutter 2012; Rigdon and D'Esterre 2017; Chang et al. 2024). In auctions, spiteful participants bid more aggressively (Mill 2017). Merely evoking a competitive mindset can diminish cooperation (Engel and Rand 2014). A fortiori, individuals might be willing to pay for professional support that may tilt the balance in their favor. But the competitive nature does not as such matter more for close cases, compared with a situation in which the party in question expects to win or lose with high probability.

A court case further invites the parties to consider their conflict not only along profit, but also along fairness lines. Fairness is a powerful motive (Bazerman and Neale 1995; Bereby-Meyer and Niederle 2005). Moreover, there are multiple fairness norms (Cappelen et al. 2007). Oftentimes conflicts arise precisely because different parties define fairness along different lines (Thompson and Loewenstein 1992; Babcock et al. 1995; Dana, Weber, and Kuang 2007; Bolton and Ockenfels 2008). Yet again from a fairness perspective, a 50-50 case is not different from a case in which the perceived odds of winning are high or low.

One motive that can rationalize more investment in legal representation if the case is a close call is the reference point dependence of utility (Kameda and Davis 1990; Kahneman 1992; Köszegi and Rabin 2006). The effect has initially been documented as a corollary of loss aversion. Most people dislike losses much more than they dislike forgone gains. Yet whether an outcome is a gain or a loss is subject to framing. One and the same outcome can often either be perceived as a gain, or as a loss (De Dreu and McCusker 1997; Brooks, Stremitzer, and Tontrup 2012). One way of conceptualizing this framing effect is a reference point. By some exogenous intervention, or by the decision-maker's own fiat, an outcome below some threshold is constructed as a loss. The effect has for instance been documented for contracts (Hart and Moore 2008; Fehr, Zehnder, and Hart 2009; Fehr, Hart, and Zehnder 2011), prices (Ahmad 2015), auctions (Trautmann and Traxler 2010), renegotiation (Herweg, Karle, and Müller 2018) and bonus payments (Ockenfels, Sliwka, and Werner 2014). It could be that, in a case that goes to court, not winning is framed as a loss. If that were true, and if the prior is close to 50-50, attention could zero in on the palpable risk of losing.

This explanation is closely related to an effect that has repeatedly been documented in the psychological literature. Experimental participants suffer from a "near miss" more than from not winning if the perceived odds have been low in the first place (Reid 1986; De Cremer and van Dijk 2011; Zhang and Covey 2014; Palmer, Ferrari, and Clark 2024).

Both reference point dependence and the near miss effect can be rationalized with anticipated regret (Loomes and Sugden 1982; 1987; Zeelenberg 1999; Sandberg and Conner 2008; Brewer, DeFrank, and Gilkey 2016). The effect has for instance been proposed as an explanation for

overbidding in first-price private-value auctions (Filiz-Ozbay and Ozbay 2007), for individuals shying away from exposing themselves to risk that they cannot manage (Nordgren, Van Der Pligt, and Van Harreveld 2007), and for escalating commitments (Wong and Kwong 2007). In this perspective, the reason why participants go the extra mile to avoid a near miss is the fear of falling below their reference point. In this perspective, individuals expect to regret dearly if they have missed the opportunity to tilt the balance in their favor, and lose.

Based on these considerations, we hypothesize:

> If participants are told that the odds of winning in court are "fifty-fifty," they are more likely to express the intention to hire a professional lawyer, compared with learning that the odds of winning are "very low" or "very high," while holding constant the marginal expected gain from hiring the lawyer.

III. Design

We used a survey experiment to test whether there is indeed a tipping point effect. We recruited 450 experimental subjects through Credamo, a Chinese online survey platform.[2] Survey studies that use the Credamo platform to recruit subjects have been published in leading scientific and social science journals such as PNAS (Lu et al. 2022; Jin et al. 2024) and Journal of Consumer Research (Gai and Puntoni 2021). Summary statistics regarding participants' demographic features can be found in Table A.1 in the Appendix. Based on data from a pilot, and using simulation, we had calculated that we need 102 participants per condition to identify an effect of the same size. To be on the safe side, and as announced in our pre-registration, we recruited 150 participants per condition. We preregistered the experiment on the Open Science Forum.[3]

Participants were randomly assigned to one of three conditions. Treatments differed by the exogenous information about the odds of winning. Odds were either "very low", "fifty-fifty" or "very high". The participants then were asked whether they would pay to hire an attorney to increase the odds of winning.[4] The survey instrument read:

> In January 2023, you signed a technology service contract with Party A, agreeing to provide technology services to him. Party A had already paid most of the price. In June, you completed the technology services, but Party A believed that the technology services did not meet the expected standard and refused to pay the remaining 500,000 yuan. You have repeatedly urged Party A for payment, but Party A has not paid you the remaining amount. Therefore, you decided to sue Party A in court.

2 https://www.credamo.world/#/.
3 https://osf.io/3ep65/?view_only=bae0fd81bd8748d880d6e053bde2df15.
4 Greiner and Pattanayak (2011) and Greiner, Pattanayak, and Hennessy (2013) cast doubt on whether hiring attorneys change litigation outcomes. Poppe and Rachlinski (2015), reviewing all the studies until then, contend that lawyers do matter. For our study, as long as the Chinese subjects generally believe that attorneys are not useless, whether in fact retaining counsel affects litigation outcomes does not concern our design.

> If you win, Party A will pay you 500,000 yuan, but if you lose, you will not receive the remaining 500,000 yuan. Considering the evidence you have, you feel that your chance of winning is very low [fifty-fifty, very high].
>
> You have learned that if you hire a lawyer, you will spend about an additional 60,000 yuan. At the same time, hiring a lawyer will increase your chance of winning by about 15 percentage points.[5]
>
> How will you choose?
>
> A. Do not hire a lawyer (the chance of winning remains very low [fifty-fifty, very high].
>
> B. Spend an extra 60,000 yuan to increase the chance of winning from very low [fifty-fifty, very high] to relatively low [relatively high, almost certain to win the case].

Participants earned about 1 to 2 yuan for their participation. We used an unincentivized survey instrument for external validity.

It has often been observed that mathematically untrained participants have a hard time processing numerical probabilities. This is why we, instead, opted for the three verbal levels "very low", "fifty-fifty" and "very high." This is in line with psychological research on "intuitive mathematics": unless they have been specifically trained, humans reason about quantities in such relatively brushing qualitative terms (Barth, Kanwisher, and Spelke 2003; Barth et al. 2005; Lipton and Spelke 2005).

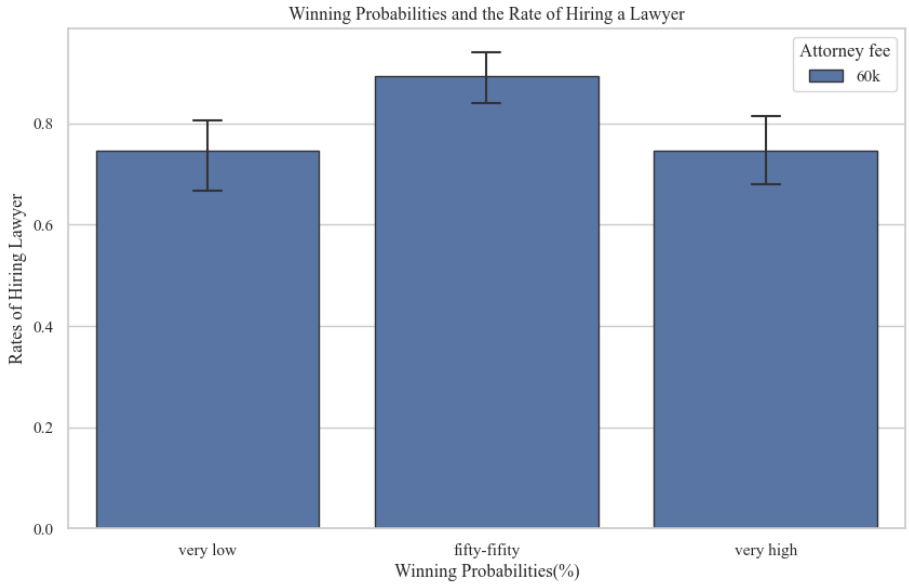
As an additional safeguard, after the main experiment, we asked participants to give us their personal estimate of the probability corresponding to the treatment manipulation, i.e. "very low", "fifty-fifty" or "very high." We also elicited risk preferences and demographic information. The complete instructions are in the Appendix.

IV. The tipping point effect

Figure 4 has our main result. We find a clear tipping point effect. In the "fifty-fifty" condition, 89.3% of our participants indicate that they would have hired a lawyer, while only 74.7% do if the odds of winning are either "very low" or "very high." The difference between the "fifty-fifty" and each of the remaining two conditions is significant at the 0.1% level (Fisher's exact, p = .001).

5 In the Chinese original, we use the word "15%." This is understood as percentage points by native Chinese speakers, not as percent. Hence the benefit of hiring a lawyer was held constant across treatments.

Figure 4 Rate of Hiring a Lawyer Conditional on Prior



Notes: The error bars show the 95% confidence interval. N=150 in each bar.

Table 1 reports the related results from linear regression models with controls.

As a robustness check,

Table 1 adds controls. Both comparisons with the fifty-fifty condition remain significant.

Table 1 Linear Probability Model: Hiring a Lawyer as Dependent Variable

	(1) Fifty-fifty vs. Very Low	(2) Fifty-fifty vs. Very High
Dependent variable: hiring a lawyer=1; not hiring a lawyer=0		
Treatment Condition		
Fifty-fifty	0.1130**	0.1436***
	(0.0471)	(0.0492)
Litigation Experience		
Participated	-0.0028	-0.0139
	(0.0512)	(0.0547)
Risk Preference		
Self-Assessment	0.0437***	0.0181
	(0.0107)	(0.0116)
Demographics		
Age	0.0007	0.0009
	(0.0036)	(0.0037)
Male	-0.0899*	-0.0492
	(0.0494)	(0.0518)
Observations	300	300
R-squared	0.2187	0.1528
Adj R-squared	0.0803	0.0027
Province FEs	Yes	Yes
Education	Yes	Yes
Occupation	Yes	Yes
Response Time	Yes	Yes

Notes: This table reports the results from estimating a linear probability model using hiring a lawyer (=1) as the dependent variable. Litigation experience (Participated) is a dummy variable, which equals 1 if a participant has any litigation experience (including as a litigant, a third party, a witness, an agent, etc.). Risk preference is based on participants' self-assessment, with a higher number indicating more risk-seeking. Standard errors are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

This gives us our main

> **Result:** If participants are told in a mock court case that the odds of winning are "fifty-fifty", they are more likely to say that they would seek costly legal advice than if the odds of winning are either "very low" or "very high."

V. Exploring the Mechanism

Now that we have established the tipping point effect, we explore the mechanism. We stress again that this section is exploratory.

1. Main effect of reference point dependence, near miss and anticipated regret

As we have explained in Section II, reference point dependence, the near miss effect and anticipated regret would be able to rationalize the tipping point effect. All three (related) mental mechanisms are very basic. If any of these mechanisms explains the effect, we should be able to replicate the effect in a setting that removes the frame of a court case. This is what we have tested in our first supplementary set of treatments. In these treatments, we have kept the incentive structure constant. But now the task is a mere (compound) lottery. The instructions read:

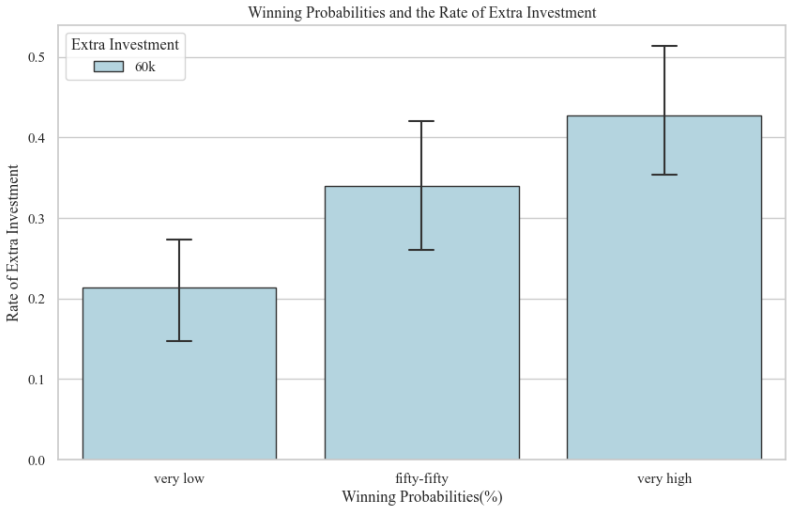
> Suppose you have a lottery ticket, and you have a very low [fifty-fifty, very high] chance of winning 500,000 yuan. That is, if you win, you will receive 500,000 yuan, and if you lose, you will receive 0 yuan. If you spend an additional 60,000 yuan, your chances of winning will increase by 15 percentage points.
>
> How would you choose?
>
> A. Do not spend an additional 60,000 yuan; the chances of winning remain very low [fifty-fifty, very high].
>
> B. Spend an extra 60,000 yuan to increase the chance of winning from very low [fifty-fifty, very high] to relatively low [relatively high, almost certain to win the case].

We ran these treatments on the same platform. We again had 150 participants per condition. We also preregistered the experiment on OSF.[6] We predicted that we would replicate the tipping point effect.

As Figure 5 shows, the data clearly reject this prediction. Instead of a tipping point effect, we find a straightforward effect of the odds of winning. The higher these odds, the more participants are inclined to invest in increasing the odds of winning by 15 percentage points, at the price of 60,000 yuan. Specifically, 21.3% invest in the Very Low condition, 34.0% in the Fifty-Fifty condition, and 42.7% in the Very High condition. The comparison between the Very Low and the Fifty-fifty groups is statistically significant (Fisher's exact, $p < .05$). Yet the comparison between the Very High and the Fifty-fifty groups is not significant (Fisher's exact, $p = 0.154$).

6 https://osf.io/bxnu8/?view_only=733c893ec6c04a0099698b13fbff3963.

Figure 5 Rate of Investment to Increase Odds of Winning in Lottery



Notes: The error bars show the 95% confidence interval. N=150 in each bar.

Consequently, neither of the three basic mental mechanisms (alone) can have caused the tipping point in our main experiment: reference point dependence, the near miss effect, or anticipated regret.

2. Interaction with competitive spirit

When Figure 4 and Figure 5 are compared, it is clear that the tipping point effect only obtains if we ask participants to put themselves into the shoes of a litigant. In the behavioral literature, this is called a framing effect (Tversky and Kahneman 1981; Andreoni 1995; Kühberger 1998; Cookson 2000; Dufwenberg, Gächter, and Hennig-Schmidt 2011; Dreber et al. 2013; Engel and Rand 2014). Frames have the power to evoke identity (Brewer and Kramer 1986), moral intuitions (Depoorter and Tontrup 2012), moral and social norms (Banerjee 2016), emotions (Cubitt, Drouvelis, and Gächter 2011) and, in the context of our experiment, competitive spirit.

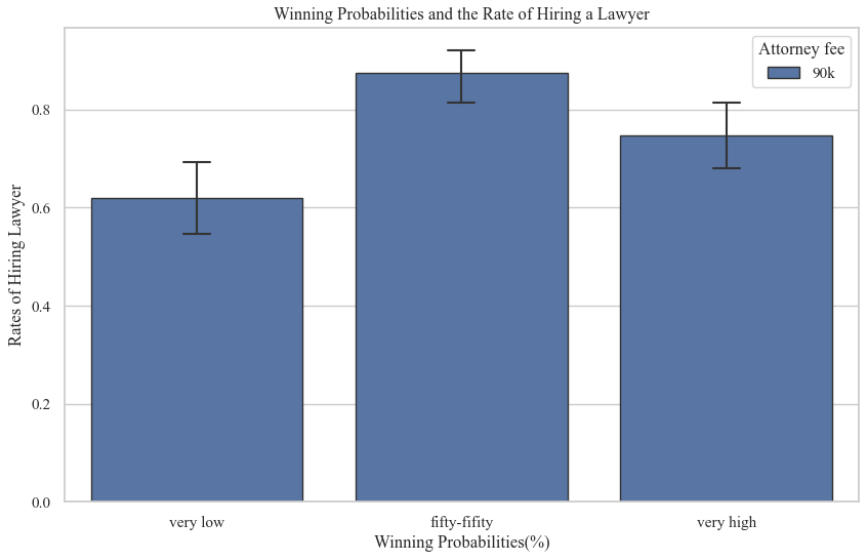
Now in section II we have explained why, per se, the framing effects triggered by the litigation context cannot yield a tipping point effect: if the plaintiff's prior belief of winning in court is "very low" or "very high," the situation would be no less competitive. Yet the fact that we only find the tipping point effect if the otherwise identical choice problem is framed as litigation suggests an interaction effect: Neither the basic mental mechanisms nor the framing alone suffice to trigger the tipping point effect. The effect only obtains if the competitive spirit comes together with the perception that the conflict is a close call.

To further back up this tentative explanation, we have run yet another set of treatments. In these treatments we use the same frame as in the main experiment. But now the cost of hiring the legal representative is as high as 90,000 yuan. As we keep the benefit constant (in expectation, the odds of winning increase by 15 percentage points), a person intended to maximize profit would not hire the lawyer, irrespective of her prior. In expectation, the cost exceeds the

benefit. We have pre-registered the hypothesis that we would replicate the tipping point effect regardless.[7]

As Figure 6 shows, we indeed fully replicate the results from the main experiment (compare Figure 4). Actually, statistical results in both the Fifty-fifty and the Very High conditions are indistinguishable whether hiring a lawyer is profitable (main experiment) or prohibitive (additional treatments). When the cost of hiring a lawyer is prohibitive, the hiring rate in the Very Low condition is significantly lower (62.0% vs. 74.7%, Fisher's exact, p <.05). This provides strong support for the framing effect: participants even intend to lose money to increase their chance for beating their opponent. We also find a strong tipping point effect. If the stated odds of winning are "very low", 62.0% indicate that they would hire a lawyer. This rate increases to 87.3% in the "Fifty-fifty" condition (Fisher's exact, p < .001). Most interestingly, the rate is again significantly lower (74.7%) in the "very high" condition, yielding a clear tipping point effect (Fisher's exact, p < .01). Even if, in expectation, participants lose money, they are not willing to forgo the opportunity to beat the opponent if they believe that professional support is critical to make a difference.

Figure 6 Rate of Hiring a Lawyer if Cost is Prohibitive



Notes: The error bars show the 95% confidence interval. N=150 in each bar. Table A. 2 reports the related results from linear regression models with controls.

We repeat the regression analysis shown in Table 1 for the 90,000 Yuan experiment. The results are similar (see Table A.2 in the Appendix).

3. Certainty effect

Our experiments also enable us to test the certainty effect. In the lottery condition, the higher the prior odds of winning, the higher the willingness to pay for professional representation

7 https://osf.io/bxnu8/?view_only=733c893ec6c04a0099698b13fbff3963.

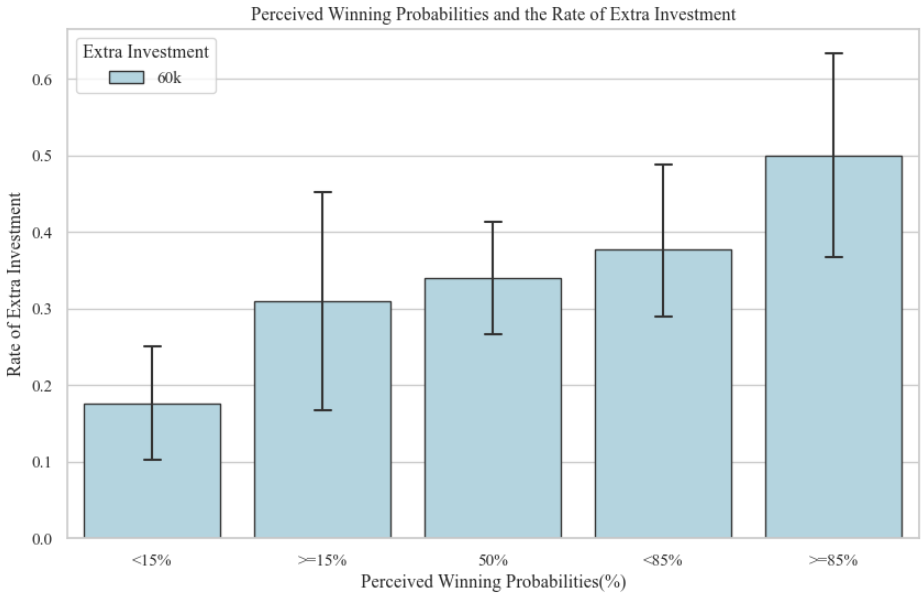
(Figure 5). If hiring an attorney does not increase the expected profit (as the cost is 90,000 Yuan), the stated willingness to pay for representation is higher in the "very high" than in the "very low" condition. Both observations are consistent with a well-documented basic behavioral effect: participants tend to be willing to pay for removing any uncertainty (Allais 1953; Kahneman and Tversky 1979; Schmidt 1998; Cerreia-Vioglio, Dillenberger, and Ortoleva 2015).

To test whether the certainty effect has also materialized in our experiment, we exploit the fact that, after the main experiment, we have asked participants to give us a numerical interpretation of the manipulation. Hence, we have asked participants in the "very high" condition how they have understood this element of the design, and we have asked participants in the "very low" condition the analogous question. Now if a participant interprets "very high" to be at or above 85%, this participant expects to win with certainty when being supported by a professional lawyer. On the other hand, if a participant interprets "very low" to be at or below 15%, in expectation hiring the lawyer might not be worth the while.

As

Figure 7 shows, in the lottery condition, we find a strong certainty effect. If participants interpret "very high" at or above 85%, 50.0% intend to get professional support, while only 37.8% do if their interpretation of "very high" is below 85% (Fisher's exact, p =.094). Likewise on the lower end: if they interpret "very low" below 15%, only 17.6% indicate that they intend to hire a lawyer, while this fraction increases to 31.0% if they interpret "very low" at or above 15% (Fisher's exact, p =.061). Actually, if we focus on interpretations within the range of (15%, 85%), results are statistically indistinguishable. We conclude that the apparent effect of the prior in Figure 5 is actually driven by the certainty effect.

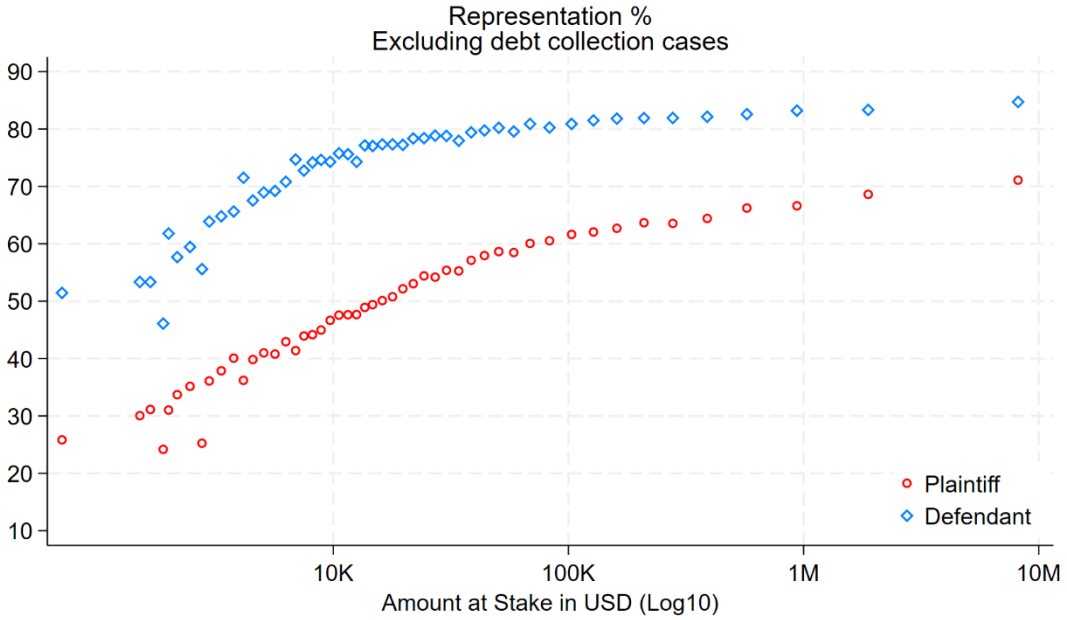
Figure 7 Rate of Investment to Increase Odds of Winning in Lottery by Perceived Probability



Notes: The error bars show the 95% confidence interval. N=108, 42, 150, 90, and 60 in the bars from left to right. Fisher's exact tests on the differences between the five groups are reported in Table A. 4.

As Figure 8 shows,[8] we also find a certainty effect in the conditions framed as litigation. Most

8 Figure 8 combines the data from both the 60K and 90K litigation experiment so that each of the five groups has a decent number of observations. If the two experiments are separated, as Figure A. 1 Representation Rate by Stake, Mainland China 2014–2020 (Excluding Debt Collection Cases)

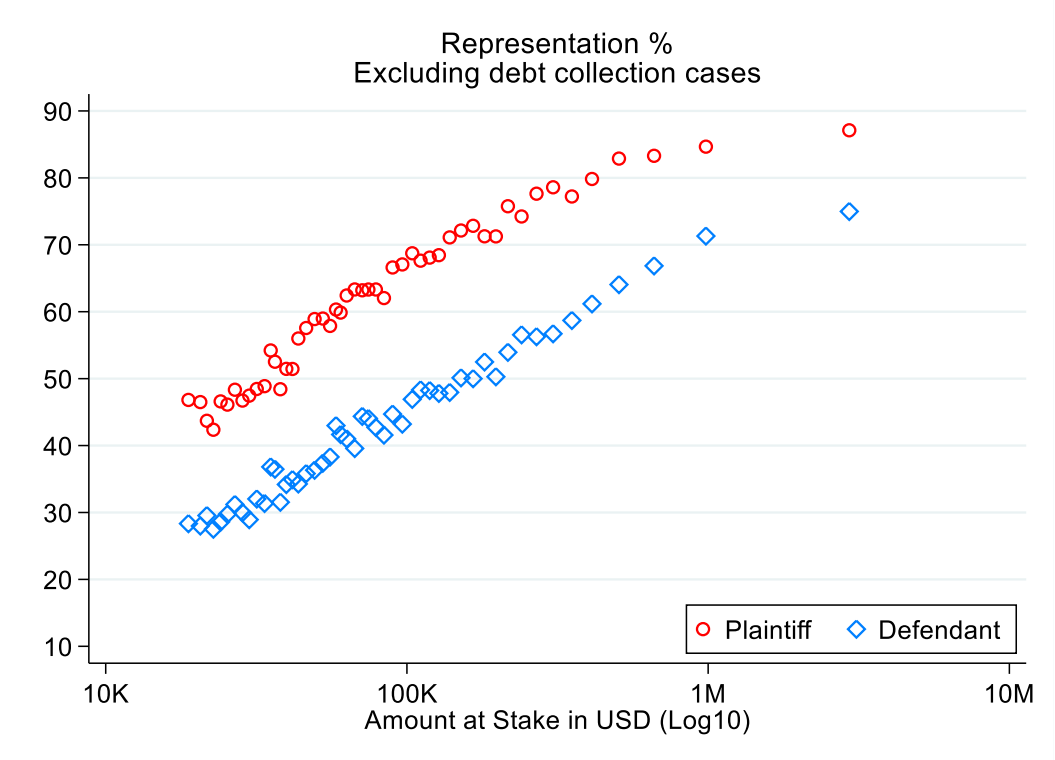


Notes: N= 2,162,791. Other than excluding debt collection cases, how we produced this figure is the same as that for Figure 1.

importantly for our research question though, we even find a significant tipping point effect if we only consider choices by participants who interpret "very low" to be above 15%, and who interpret "very high" to be below 85% (Fisher's exact, $p < .05$).

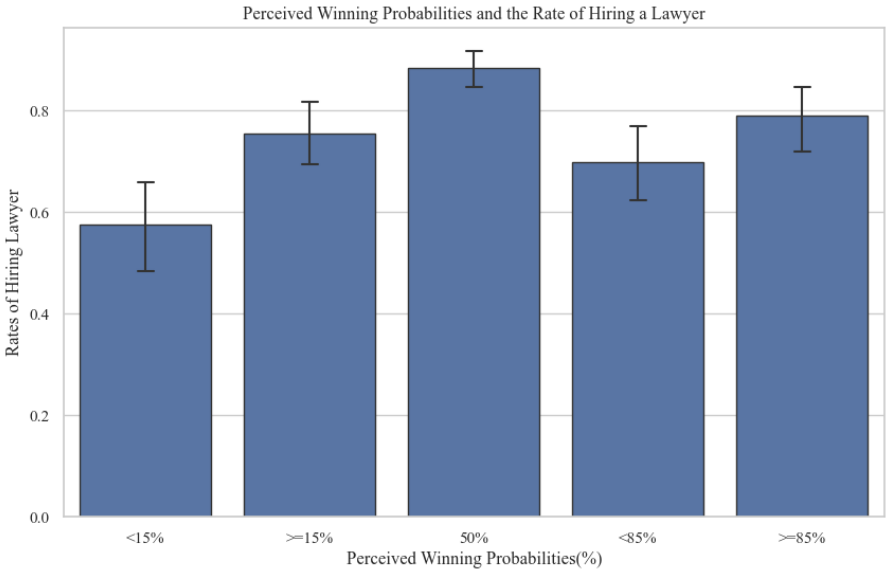
Figure 8 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 60 K & 90 K combined)

Figure A. 2 Representation Rate by Stake, Taiwan 2002–2019 (Excluding Debt Collection Cases)



Notes: N= 156,958. Other than excluding debt collection cases, how we produced this figure is the same as that for Figure 2.

Figure A. 3 and Figure A. 4 show, the certainty effect is not statistically significant. That is, Fisher's exact test for the differences in the 50-50 group and the group in which participants interpret "very high" to be at or above 85% produce $p = 0.129$ for the 60 K experiment, and $p = 0.149$ for the 90K experiment. See also Tables A.5 & A.6.



Notes: The error bars show the 95% confidence interval. N= 120, 180, 300, 143, and 157 in the bars from left to right. Fisher's exact tests on the differences between the five groups are reported in Table A. 3.

VI. Discussion and Conclusion

Our experimental results support our theory that litigants whose prior winning probability is close to 50% are more likely to seek legal representation, while those who perceive themselves as winning or losing with high probabilities are less inclined to retain counsel. This theory could help explain the real-world puzzle that even high-stakes litigants remain *pro se*: if high-stakes litigants believe that they are very likely to win or lose, they may opt to stay unrepresented.

To be clear, we are not arguing that the tipping point effect alone suffices to explain the observed behavioral regularity. Very likely there are additional motives. We for instance do not know what the individual cases were about; even if stakes are high, for some case categories (like enforcing a contract against a defendant one knows to be close to bankruptcy) the scope for professional expertise may be small. In other situations, plaintiffs may prefer not to fight too vigorously in the interest of maintaining the business relationship. All we want to show with the help of our experiment is one consistent explanation. Very likely, the puzzle that has motivated our endeavor still remains, but it has been partly diminished.

Any empirical investigation has limitations, and our experiment is no exception to this rule. The most important limitation results of course from our choice of method. We have run a survey experiment. Participants have been remunerated for participation, not for the choices they have made. This limitation is motivated by external validity. We could not have afforded a high stakes experiment. Even if we had unlimited funds, we could not replicate a real-world business relationship. With the help of the experimental frame, we have been able to put participants into the mindset of the social conflict that we want to study. As any framed experiment, ours comes with additional limitations resulting from the exact wording of the scenario. We

cannot exclude that a different business conflict would have led to different outcomes. The story makes the plaintiff understand that, in her perspective, the defendant has acted unfairly. With our data. we cannot see whether results would look different, were the plaintiff to see the conflict in a more neutral light. Moreover, we have only tested the hypothetical choice of a plaintiff, not of a defendant; from the observational data we know that defendants are even less likely to be professionally represented. Finally, we have (deliberately) taken the decision to sue the defendant out of the equation. We thus have put participants into the mindset of a situation in which they previously had already decided that they want to fight. We cannot exclude that this personal commitment to fight for the cause might have exacerbated the tipping point effect.

We have been able to narrow down the plausible mental mechanisms that might generate the tipping point effect. With the help of the lottery experiment, we can exclude that mere reference point dependence, the perception of a near miss, or anticipated regret alone create the effect. The choice problem must be presented as a social conflict in which an investment is able to tilt the balance. With our data we cannot, however, say whether any social conflict would suffice or whether litigation is special; whether perceived unfairness of the opponent is a necessary element; whether the person must have previously committed to fighting. Further defining the framework conditions for the tipping point effect, and isolating the mental mechanism, must be left to future work.

The limitations inherent in our method notwithstanding, we find it remarkable that we even replicate the tipping point effect if hiring a professional lawyer in expectation reduces profit. This suggests that the perception of a close case, and the anticipation of regret when not retaining professional counseling, is a serious concern in the parties' litigation choices, and one that hitherto has escaped academic (and as it seems also practical) attention.

For policymakers, our empirical findings have important implications. Enlightened by the "haves" versus "have nots" literature, policymakers worldwide have established legal aids to give indigent parties equal access to justice (Sommerlad and Wall 1999; Sommerlad 2001; Sandefur 2009; Krieger 2015; Hsu, Chiang, and Chang 2024). Our research suggests that such a policy is not enough to fully address the problems of lack of expertise and inequality in expertise caused by *pro se* litigation. In Germany, attorney representation is mandatory in civil lawsuits handled by regional courts (but not by local courts). In Taiwan, attorney representation is mandatory for appellants to the Supreme Court and the legislature is considering a bill that expands mandatory attorney representation to high-stake civil lawsuits in lower courts.[9] This type of policy, while motivated by multiple concerns, could be considered as a potential device to facilitate overcoming the tipping point effect. That is, litigants may miscalculate their odds of winning (say, due to self-serving bias and thus over-confidence) and thus decide not to retain counsel. Alternatively, litigants may correctly estimate their *ex ante* odds of winning but underestimate the value of professional representation. In both scenarios, mandatory representation increases *their* chances of winning. Of course, from a social perspective, the outcome of a lawsuit is zero-sum and mandating both parties to retain representation cannot possibly increase the probability of winning for *both* parties. Yet, perhaps legal representation

9 See § 466-1 and the proposed new § 68-1 of the Taiwan Civil Procedure Code.

on both sides leads to a judicial decision that is closer to the objective truth. This will be a topic for another day.

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Appendix A Experimental Materials and Additional Results

A1. Experimental Questionnaire (English Translation)

[Title:] Questionnaire on Hiring a Lawyer [Lottery]

Sir/Madam,

Hello! Thank you for taking the time to participate in our survey. Our research is jointly conducted by the University of Hong Kong and the Max Planck Institute in Germany. We aim to understand people's willingness to hire lawyers in litigation cases [people's behavior in buying lottery].

Participation in this survey is voluntary. If you do not wish to participate in the survey, or if you wish to discontinue the survey, you may do so at any time without suffering any disadvantage.

In the following questionnaire, you will read a few questions. We kindly request that you carefully consider and respond to them.

After completing the questionnaire, you will receive compensation (paid through the Credamo platform). The funding for this research comes from the government funding for basic research.

The data collected in the course of this survey will be stored separately from any personal data. It is not possible to draw conclusions about individual participants. The anonymized data will be used exclusively for research purposes, in particular the preparation of scientific research papers and presentations, and will only be stored for evaluation purposes. Scientific papers will be published in academic journals and on relevant websites.

Your anonymized data may be made available for subsequent use by third parties in order to ensure transparency in science. The purpose, type and scope of this subsequent use are not yet foreseeable at the present time.

[Consent] Do you agree to participate in this survey? You have the right to stop answering the questionnaire and withdraw at any time.

- ○ Agree
- ○ Disagree

[Basic Information -Page 1]

Please select your gender [Single choice]

- ○ Male
- ○ Female

Please enter your age [Fill in]

Please select your occupation type [Single choice]

- ○ Student
- ○ State-owned enterprise
- ○ Public institution
- ○ Civil servant
- ○ Private enterprise
- ○ Foreign-funded enterprise
- ○ Other [Fill in]

Please select your city [City]

Please select your highest education level [Single choice]
- ○ Primary School and Below
- ○ Junior high school
- ○ General High School / Polytechnic School / Technical School / Vocational High School
- ○ Junior College Education
- ○ Undergraduate
- ○ Master's degree
- ○ Doctoral degree

Please enter your major [Fill in]

[The Hiring Lawyer Experiment as example -Page 2]

(The minimum display time for this question page is set at 40 seconds.)

In January 2023, you signed a technology service contract with Party A, agreeing to provide technology services to him. Party A had already paid most of the price. In June, you completed the technology services, but Party A believed that the technology services did not meet the expected standard and refused to pay the remaining 500,000 yuan. You have repeatedly urged Party A for payment, but Party A has not paid you the remaining amount. Therefore, you decided to sue Party A in court.

If you win, Party A will pay you 500,000 yuan, but if you lose, you will not receive the remaining 500,000 yuan. Considering the evidence you have, you feel that your chance of winning is very low [fifty-fifty, very high].

You have learned that if you hire a lawyer, you will spend about an additional 60,000 [90,000] yuan. At the same time, hiring a lawyer will increase your chance of winning by about 15 percentage points.

How will you choose? [Single choice]

A. Do not hire a lawyer (the chance of winning remains very low [fifty-fifty, very high].

B. Spend an extra 60,000 [90,000] yuan to increase the chance of winning from very low [fifty-fifty, very high] to relatively low [relatively high, almost certain to win the case].

[Reasons for choice-Page 3]

What percentage would you consider as very low [fifty-fifty, very high] probability of winning? (e.g. X%) [Fill in]

(Hiring Lawyer Experiment only) What are the reasons behind your choice of 'suing and hiring a lawyer' or 'suing without hiring a lawyer'? [Fill in]

[*Condition: A participant must input at least 10 characters in Chinese; otherwise, unable to proceed to the next page*]

[Participation in litigation-Page 4]

Have you ever participated in a lawsuit as a party, witness, or agent? [Multiple choices]
- ○ Yes, I have been a plaintiff.
- ○ Yes, I have been a defendant.
- ○ Yes, I have been a third party.
- ○ Yes, I have been a witness.
- ○ Yes, I have been an agent.
- ○ Yes, I have participated in litigation in other ways. [Fill in]
- ○ No.

[Testing risk aversion -Page 5] [We follow the standard approach in the literature to test risk preference{Chen, 2019 #27}{Eckel, 2002 #26}.]
We would like to know your risk preference using the following questions.

1. In generally, how willing or unwilling you are to take risk? [Slider question]
(Very unwilling) 0 1 2 3 4 5(Not sure) 6 7 8 9 1 0 (Very willing)

2. Imagine in a lottery, what would you prefer? [Single choice]
2.1
A. RMB 2000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.2
A. RMB 3000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.3
A. RMB 4000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.4
A. RMB 5000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.5
A. RMB 6000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.6
A. RMB 7000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing
2.7
A. RMB 8000 as a sure payment
B. 50 percent chance of receiving RMB 10000, the same 50 percent chance of receiving nothing

3. For the following lottery options, please choose one that you like the most? [Single choice]
A. RMB 1600 as a sure payment
B. 50 percent chance of receiving RMB 2400, the same 50 percent chance of receiving RMB 1200
C. 50 percent chance of receiving RMB 3200, the same 50 percent chance of receiving RMB 800
D. 50 percent chance of receiving RMB 4000, the same 50 percent chance of receiving RMB 400
E. 50 percent chance of receiving RMB 4800, the same 50 percent chance of receiving nothing
[Rule]

- If a participant chooses option A, it is coded as 1, if a participant chooses option B, it is coded as 2, and so on, if a participant chooses option E, it is coded as 5.
- A higher value means preferring riskier options.

[Testing attention -Page 6]
This question assesses your attentiveness to answering questions. Please select “Very dissatisfied” in the following options. [Single choice]

- ○ Very dissatisfied
- ○ Dissatisfied
- ○ Satisfied
- ○ Very satisfied

[Condition: If "Very dissatisfied" is not selected, proceed to: Auto-reject]

A2. Experimental Questionnaire (Original Chinese Version)

[标题:] 雇佣律师【彩票问题】问卷

尊敬的先生/女士：

您好！感谢您抽出时间参与我们的问卷调查。我们的研究由香港大学和德国马普所联合主持，想了解人们在诉讼中聘请律师的意愿【人们购买彩票的行为】。

本调查为自愿参与。如果您不希望参加调查，或希望中途停止，您可以随时退出问卷，且不会有任何不利影响。

以下问卷中，您将阅读几道问题，希望您仔细思考并作答。

回答问卷后，您将获得一定的报酬（通过见数平台支付）。资金支持来自国家基础研究经费。

为保障数据和隐私安全，问卷收集的信息将与所有个人信息分开储存。同时，我们不会根据任何单个参与者的信息得出任何研究结论。问卷收集的数据将匿名化处理，并仅用于研究目的，包括论文写作和研究结果的发布。为方便未来的科学评估，我们会存储数据一段时间。问卷形成的工作论文将发表在学术期刊和相关网站上。为确保科学研究的透明性，在对问卷收集的数据进行匿名处理后，后续可能会提供给第三方评审人使用，现在还并不完全确定这些后续使用的目的、类型和范围。数据的使用将严格匿名化，以保障个人隐私。

[同意] 您是否同意参加本问卷调查？您有权利随时停止作答并退出问卷。

- ○ 同意
- ○ 不同意

[基础信息 -第1页]

请选择您的性别 [单选]

- ○ 男
- ○ 女

请填写您的年龄 [填空]

请选择您的职业类型 [单选]

- ○ 学生
- ○ 国有企业
- ○ 事业单位
- ○ 公务员
- ○ 民营企业
- ○ 外资企业
- ○ 其他 [填空]

选择您所在城市 [城市]

请选择您的最高学历 [单选]

- ○ 小学及以下

- ○ 初中
- ○ 普高/中专/技校/职高
- ○ 专科
- ○ 本科
- ○ 硕士
- ○ 博士

请填写您所学的专业 [填空]

[雇佣律师实验作为例子 - 第2页]

（此问题页面的最短显示时间设置为40秒。）

你与甲某于2023年1月签订一份技术服务合同，约定你向甲某提供技术服务，甲某已经支付大部分价款。6月，你已完成技术服务，但甲某认为技术服务未能达到预期效果，拒绝支付50万元尾款。你多次向甲某催款，甲某一直没有向你支付该笔尾款。于是，你决定到法院起诉甲某。

如果你胜诉，甲某将付给你50万元，如果败诉，你将不能获得50万元尾款。考虑到手上的证据情况，你感觉自己的获胜概率非常低 [五五开，非常高]。

你了解到，如果聘请律师，你将额外花费6[9]万元左右。同时，聘请律师将使你获胜的概率增加15%左右。

你会如何选择？[单选]

A. 不聘请律师（获胜概率仍非常低[五五开，非常高]）。

B. 额外花费6[9]万元将获胜概率从非常低 [五五开，非常高] 提高15%左右，但仍然比较低 [获胜概率将比较高，几乎可以确定胜诉] 。

变量：

- 此案件的获胜概率：非常低，五五开，非常高

[选择原因-第3页]

您认为胜率“**非常低 [五五开，非常高]**”用数字表示是百分之多少？（如：X%） [填空]

（仅雇佣律师版）请问您选择“起诉并聘请律师”或“起诉不聘请律师”的原因是什么？ [填空]

[条件：答题者必须输入至少10个汉字，否则无法进入下一页]

[诉讼参与-第4页]

您是否曾作为案件当事人、证人或者代理人参加过诉讼？[可多选]

- ○ 是，曾做过原告
- ○ 是，曾做过被告
- ○ 是，曾做过第三人
- ○ 是，曾做过证人
- ○ 是，曾做过代理人

○ 是，曾以其他方式参与诉讼案件 [填空]
○ 否，并没有参加过任何诉讼

[测试风险厌恶-第5页]
我们想通过以下问题了解一下您的风险偏好。

1、一般来说，您在多大程度上愿意承担风险？[滑块题]
（完全不愿意承担风险）0 1 2 3 4 5(不确定) 6 7 8 9 10（非常愿意承担风险）

2、请想象这是一个抽奖活动，并在以下两个选项中选出您更偏好的一项 [每小题单选]
2.1
A.直接获得2000元
B.50%的概率获得10000元，50%的概率获得0元
2.2
A.直接获得3000元
B.50%的概率获得10000元，50%的概率获得0元
2.3
A.直接获得4000元
B.50%的概率获得10000元，50%的概率获得0元
2.4
A.直接获得5000元
B.50%的概率获得10000元，50%的概率获得0元
2.5
A.直接获得6000元
B.50%的概率获得10000元，50%的概率获得0元
2.6
A.直接获得7000元
B.50%的概率获得10000元，50%的概率获得0元
2.7
A.直接获得8000元
B.50%的概率获得10000元，50%的概率获得0元

3、请从以下五组彩票中选择您最愿意购买的一项：[单选]
A.确定地获得1600元
B.50%的概率获得2400元，50%的概率得到1200元
C.50%的概率获得3200元，50%的概率得到800元
D.50%的概率获得4000元，50%的概率得到400元
E.50%的概率获得4800元，50%的概率得到0元
[计分规则]

- 若选择A选项则计1，若选择B选项则计2，依此类推，若选择E选项则计5。
- 更高的值意味着受试者更偏好风险选项。

[注意力测试-第6页]

本题检验是否认真作答。请在以下选项中选择“非常不满意”。[单选]

- ○ 非常不满意
- ○ 不满意
- ○ 满意
- ○ 非常满意

[条件：若“非常不满意”未选定，跳至：自动拒绝]

A3. Question on Lottery

(On Page 2 of the Questionnaire in the Lottery Experiment)
English Translation

Suppose you have a lottery ticket, and you have a very low [fifty-fifty, very high] chance of winning 500,000 yuan. That is, if you win, you will receive 500,000 yuan, and if you lose, you will receive 0 yuan. If you spend an additional 60,000 yuan, your chances of winning will increase by 15 percentage points.
How would you choose? [Single choice]
A. Do not spend an additional 60,000 yuan; the chances of winning remain very low [fifty-fifty, very high].
B. Spend an extra 60,000 yuan to increase the chance of winning from very low [fifty-fifty, very high] to relatively low [relatively high, almost certain to win the case].

Original Chinese Version

假设你手上有一张彩票，你有非常低 [五五开，非常高]的机会赢得50万元。即，获奖时会获得50万元，不获奖则得到0元。如果你多花6万元购买彩票，你的获奖概率将增加15%。你会如何选择？

A. 不花额外的6万元购买彩票，获奖概率不变，仍为非常低[五五开，非常高]。

B. 多花6万元将获胜概率从非常低 [五五开，非常高] 提高15%左右，但仍然比较低 [获奖概率将比较高，几乎可以确定获奖] 。

Table A. 1 Summary Statistics of the Baseline Experiment

Variables	(1) Percentage/Mean	(2) Std.	(3) Obs
Basic Information			
Age	31.2	9.00	450
Male	38.4%	-	173
Female	61.6%	-	277
Occupation			
Civil Servant	3.1%	-	14
Foreign Funded Enterprise	5.3%	-	24
Private Enterprise	40.9%	-	184
Public Institution	8.2%	-	37
State Owned Enterprise	15.1%	-	68
Student	24.0%	-	108
Other	3.3%	-	15
Educational Background			
Junior High School	0.9%	-	4
General High School / Polytechnic School / Technical School / Vocational High School	3.3%	-	15
Associate Degree	9.3%	-	42
Undergraduate	72.2%	-	325
Master's Degree	13.3%	-	60
Doctoral	0.9%	-	4
Litigation Participation			
No participating experience	59.8%	-	269
Participated as an agent	5.8%	-	26
Participated as a plaintiff	19.8%		89
Participated as a defendant	2.2%	-	10
Participated as a third party	10.0%		45
Participated as a witness	15.3%	-	69
Participated in other ways	1.3%	-	6

Table A. 2 Linear Probability Model: Hiring a Lawyer as Dependent Variable (Cost=90k)

	(1) Fifty-fifty vs. Very Low	(2) Fifty-fifty vs. Very High
Treatment Condition		
Fifty-fifty	0.2059***	0.0965*
	(0.0506)	(0.0503)
Litigation Experience		
Participated	-0.0283	-0.0017
	(0.0556)	(0.0534)
Risk Preference		
Self-Assessment	0.0648***	0.0189
	(0.0123)	(0.0118)
Demographics		
Age	-0.0011	0.0051
	(0.0039)	(0.0039)
Male	-0.0788	-0.0451
	(0.0546)	(0.0526)
Observations	300	300
R-squared	0.2792	0.1538
Adj R-squared	0.1516	0.0039
Province FEs	Yes	Yes
Education	Yes	Yes
Occupation	Yes	Yes
Response Time	Yes	Yes

Notes: This table reports the results from estimating a linear probability model using hiring a lawyer as the dependent variable. Litigation experience (Participated) is a dummy variable, which equals 1 if a participant has any litigation experience (including as litigant, third party, witness, agent, etc.). Risk preference is based on participants' self-assessment, with a higher number indicating more risk-seeking. Standard errors are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

Table A. 3 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 60 K and 90 K combined)

Perceived *P*	(1) Very low <15%	(2) Very low ≥15%	(3) Fifty-fifty	(4) Very High <85%	(5) Very High ≥85%	(6) (3)-(2)	(7) (3)-(4)	(8) (3)-(1)	(9) (3)-(5)	(10) (5)-(4)
Perceived *P* Mean	7.2% (0.0302)	24.3% (0.0832)	50.1% (0.0108)	75.8% (0.0661)	91.0% (0.0431)					
Hiring Rate	57.5% (0.4964)	75.6% (0.4310)	88.3% (0.3216)	69.9% (0.4602)	79.0% (0.4087)					
Fisher's Exact (*p*)						0.000***	0.000***	0.000***	0.012**	0.048**
t-test (*p*)						0.000***	0.000***	0.000***	0.008***	0.036**
Observations	120	180	300	143	157					

Notes: Standard deviations are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

Table A. 4 Rate of Investment Conditional on Prior by Perceived Probability (lottery)

Perceived *P*	(1) Very low <15%	(2) ≥15%	(3) Fifty-fifty	(4) Very High <85%	(5) ≥85%	(6) (3)-(2)	(7) (3)-(4)	(8) (3)-(1)	(9) (3)-(5)	(10) (5)-(4)
Perceived *P* Mean	3.7% (0.040)	21.9% (0.0713)	50.1% (0.0082)	74.2% (0.0833)	91.2% (0.046)					
Investment Rate	17.6% (0.3825)	31.0% (0.4679)	34.0% (0.4753)	37.8% (0.4875)	50.0% (0.5042)					
Fisher's Exact (*p*)						0.853	0.579	0.004***	0.041**	0.094*
t-test (*p*)						0.713	0.556	0.003***	0.032**	0.070*
Observations	108	42	150	90	60					

Notes: Standard deviations are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

Table A. 5 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 60 K)

Perceived *P*	(1) Very low <15%	(2) Very low ≥15%	(3) Fifty-fifty	(4) Very High <85%	(5) Very High ≥85%	(6) (3)-(2)	(7) (3)-(4)	(8) (3)-(1)	(9) (3)-(5)	(10) (5)-(4)
Perceived *P* Mean	7.4% (0.0312)	23.8% (0.0792)	50.2% (0.0147)	75.7% (0.0676)	91.3% (0.0439)					
Hiring Rate	57.9% (0.4981)	85.0% (0.3595)	89.3% (0.3097)	69.9% (0.4620)	79.2% (0.4084)					
Fisher's Exact (*p*)						0.323	0.001***	0.000***	0.045**	0.129
t-test (*p*)						0.314	0.000***	0.000***	0.0383**	0.095*
Observations	57	93	150	73	77					

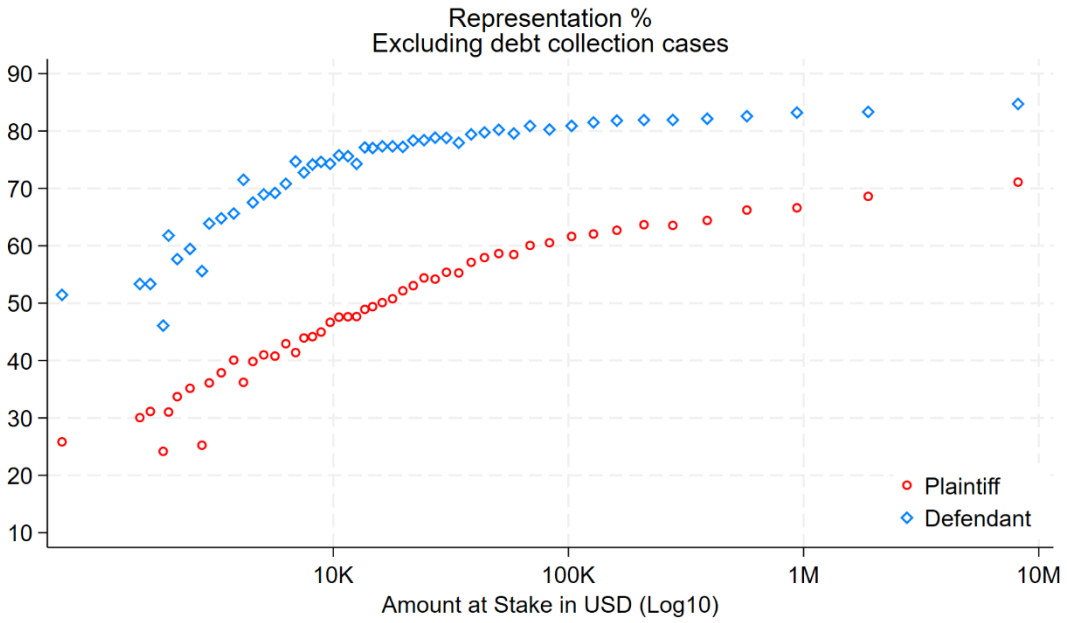
Notes: Standard deviations are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

Table A. 6 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 90 K)

Perceived *P*	(1) Very low <15%	(2) Very low ≥15%	(3) Fifty-fifty	(4) Very High <85%	(5) Very High ≥85%	(6) (3)-(2)	(7) (3)-(4)	(8) (3)-(1)	(9) (3)-(5)	(10) (5)-(4)
Perceived *P* Mean	7.0% (0.0294)	24.8% (0.0875)	50.0% (0.0041)	75.9% (0.0650)	90.7% (0.0423)					
Hiring Rate	57.1% (0.4988)	65.5% (0.4781)	87.3% (0.3337)	70.0% (0.4616)	78.8% (0.4117)					
Fisher's Exact (*p*)						0.000***	0.003***	0.000***	0.126	0.149
t-test (*p*)						0.000***	0.002***	0.000***	0.089*	0.111
Observations	63	87	150	70	80					

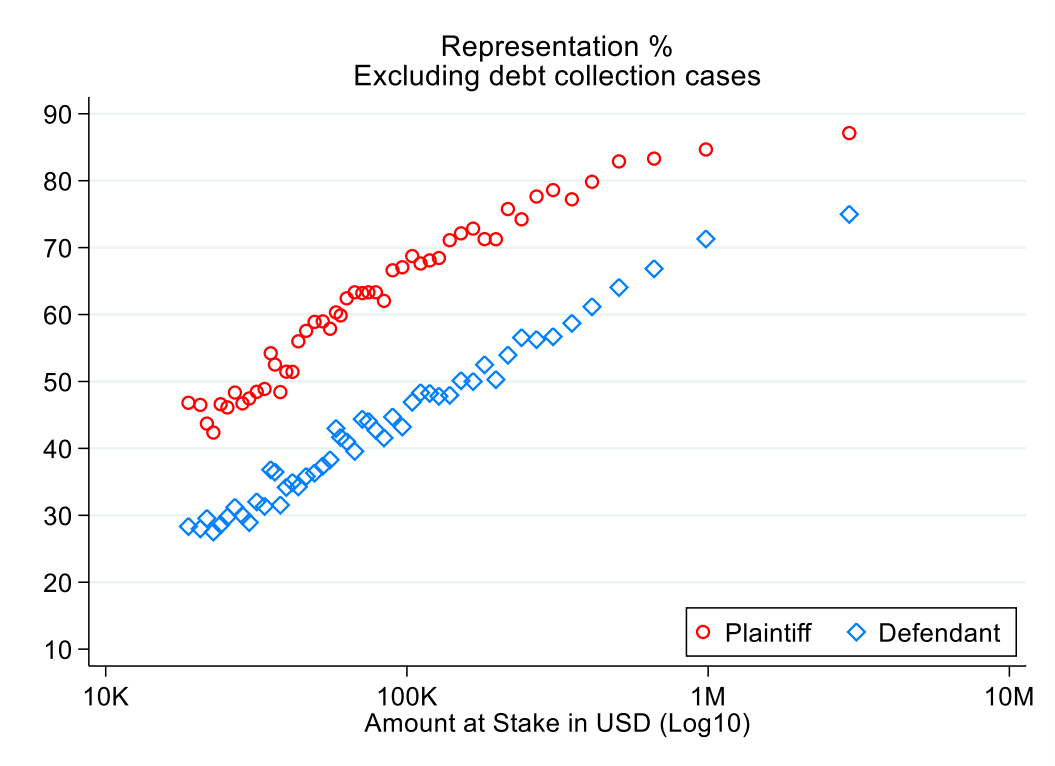
Notes: Standard deviations7 are reported in parentheses. ***, **, * indicate significance level at 1%, 5%, and 10%, respectively.

Figure A. 1 Representation Rate by Stake, Mainland China 2014–2020 (Excluding Debt Collection Cases)



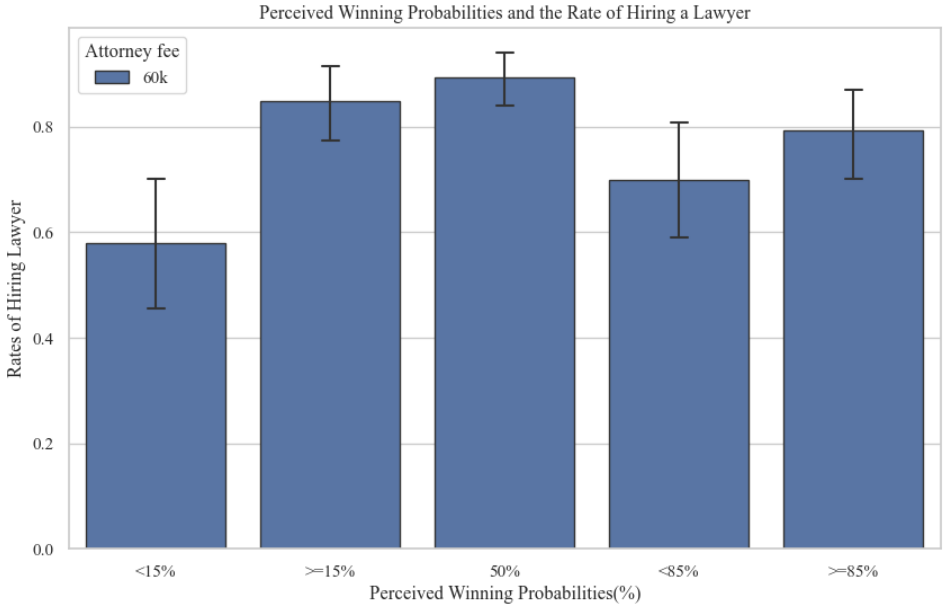
Notes: N= 2,162,791. Other than excluding debt collection cases, how we produced this figure is the same as that for Figure 1.

Figure A. 2 Representation Rate by Stake, Taiwan 2002–2019 (Excluding Debt Collection Cases)



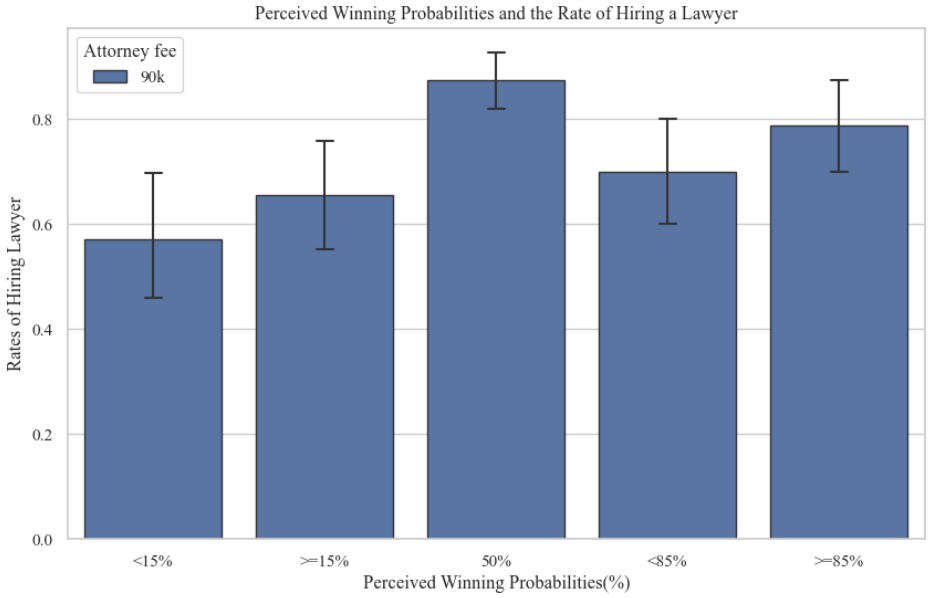
Notes: N= 156,958. Other than excluding debt collection cases, how we produced this figure is the same as that for Figure 2.

Figure A. 3 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 60 K)



Notes: The error bars show the 95% confidence interval. N= 57, 93, 150, 73, and 77 in the bars from left to right. Fisher's exact tests on the differences between the five groups are reported in Table A. 5.

Figure A. 4 Rate of Hiring a Lawyer Conditional on Prior by Perceived Probability (cost 90 K)



Notes: The error bars show the 95% confidence interval. N= 63, 87, 150, 70, and 80 in the bars from left to right. Fisher's exact tests on the differences between the five groups are reported in Table A. 6.