On “Bargaining Behavior by Defendant Insurers: An Economic Model”

by Patricia M. Danzon *

The paper by Paul Fenn and Ioannis Vlachonikolis makes an interesting contribution to the literature on out-of-court bargaining. Most previous models have defined the reservation ask and offer of plaintiff and defendant, which in turn determine the feasibility of a mutually advantageous settlement and define the range within which the settlement amount must fall. This paper goes further in positing a model of the amount of settlement within this range.

The model assumes that the defendant is a repeat player so has an incentive to establish a reputation as a hard bargainer, whereas the plaintiff is a one time player. The defendant forms a subjective probability distribution of the plaintiff's minimum ask (A) and offers the mean of this distribution, A^* . The plaintiff by assumption has no incentive to act strategically, so accepts if and only if $0_1 = A^* > A$, i. e. the offer exceeds his true minimum ask. At the next round, the defendant revises his expectation and offers the mean of the truncated distribution: $0_2 = E(A^*) \mid A > 0_1$. Again the plaintiff accepts if $0_2 > A$. This model is consistent with the empirical observation, that for each round of offers there is a 50 percent acceptance rate, given the implicit assumption that the distribution of $(\log) A$ is symmetric. The model implies that settlements are on average closer to the minimum ask than to the maximum offer, and hence that the defendant extracts a disproportionate share of the savings from settlement.

While Fenn and Vlachonikolis have provided a model that is consistent with a 50 percent acceptance rate – actual acceptance rate is 61 percent – they have not shown that this is an optimal strategy for the defendant, in terms of wealth or utility maximisation. Using this strategy, the defendant extracts less than the full surplus. By pitching the offer at the mean of the ask distribution the defendant pays more than the plaintiff's minimum ask in every case that settles. The defendant could extract a larger share of the surplus by pitching the offer lower and achieving a lower acceptance rate at each round. The optimal number of offers and acceptance rate presumably depend on the costs of delaying settlement and the probability that the plaintiff will learn that “final” offers are not in fact final and that a strategic rejection of an offer will elicit a higher offer. At the limit the plaintiff could hold out to extract the full surplus. Since 89 percent of plaintiffs are represented by a trade union or other solicitor, the assumption of no learning by plaintiffs is questionable. The model

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would be more compelling if this offer strategy were derived from an assumption of maximisation by the defendant, given an explicit cost function for the defendant, embodying the trade-off between size of offer, probability of acceptance and costs of delay.

The empirical estimates have some interesting findings but the exact interpretation remains rather unclear for three reasons. First, as the authors recognise, the selectivity corrections are only approximately correct because the second and third probit equations in Table 2 assume a normal distribution and are not corrected for truncation due to cases that have been withdrawn or settled at an earlier stage.

Second, the issue of identification is not explicitly addressed. Identification is always difficult in such contexts because it requires that the analyst can observe variables that are unobservable to one of the parties. Identification is particularly problematic in this model because of the assumption that the offer is based on the defendant's expectation of the ask. By assumption A^* is an unbiased estimate of A ; they differ only because of information that is unobservable to the defendant and hence presumably to the analyst. The identifying restrictions imposed are not related to the theoretical model and are not very plausible (see Table 4). Why do the plaintiff's costs affect the defendant's maximum offer? Why should delay (which strictly should be endogenous) affect B and A but not A^* ? The close similarity of most of the coefficients in the equations for B , A , and A^* is consistent with imperfect identification.

Third, there is no formal model of why 32 percent of cases are withdrawn without payment. The first equation in Table 2 models the probability of a positive offer: $B - A^* > 0$. Presumably most of the cases that did not receive a positive offer were dropped but a few went to verdict (2 percent of all cases). If so the cases that are assigned a zero in this probit equation are drawn from both tails of the A distribution, making the coefficients hard to interpret. The assumption that $B - A^* < 0$ is the only reason for no offer being made is also troubling on theoretical grounds. By implication the defendant expects all these cases to go to court. Since most are dropped, the model implies that the defendant systematically overestimates A in almost all these cases, is willing to go to court and is presumably pleasantly surprised when most are withdrawn.

Any tractable empirical model of the settlement process must make strong theoretical assumption and identifying restrictions, given that the process is driven by strategic bargaining involving latent expectations that are intrinsically unobservable. Fenn and Vlachonikolis have not resolved all the issues but have made a promising first step with an interesting data set.