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The Regressive Effect of Legal
Uncertainty

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The Regressive Effect of Legal Uncertainty

Abstract

Legal uncertainty has a regressive distributive effect. There are sides who gain from increasing legal uncertainty, and sides who lose from it. Legal uncertainty leads to regressive settlements. A shift from a certainty legal regime to an uncertainty legal regime transfers wealth from risk-averse parties to risk-neutral parties via the settlement. Thus, since poor people are more risk-averse than rich people, a legal uncertainty leads to a transfer of wealth from poor people to rich people. Also, since women are at least perceived to be more risk averse than men, a legal uncertainty leads to a transfer of wealth from women to men. This means that legal uncertainty has a class regressive effect and also a gender regressive effect.

The Regressive Effect of Legal Uncertainty\ Uri Weiss* .

Prolog

There are many interesting questions about legal uncertainty, which I am not going to discuss. However I am going to point out a new effect of legal uncertainty that can explain why it is such an interesting topic. This is the distributive effect of legal uncertainty.

Legal uncertainty has a regressive distributive effect. There are sides who gain from increasing legal uncertainty, and sides who lose from it. Legal uncertainty leads to regressive settlements. A shift from a certainty legal regime to an uncertainty legal regime transfers wealth from risk-averse parties to risk-neutral parties via the settlement. Thus, since poor people are more risk-averse than rich people, a legal uncertainty leads to a transfer of wealth from poor people to rich people. Also, since women are at least perceived to be more risk averse than men, a legal uncertainty leads to a transfer of wealth from women to men. This means that legal uncertainty has a class regressive effect and also a gender regressive effect.

Definition

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When I refer to legal uncertainty, I refer to the variance of the partition of the predicted judgment of the court. It is important to clarify that I do not address the probability of guessing the outcome, but about the variance of the predicted judgment. Thus, standard is not necessarily more uncertain than rule, although it is harder to guess the outcome of the trial in a case of standard. For example, a comparative negligence regime sometimes decreases the legal uncertainty.

The Regressive Effect

Legal uncertainty leads to a transfer of wealth from risk averse people to risk-neutral people. Let us take an example that will explain my theorem.

A risk-neutral and a risk-averse party – a bank and a customer – are litigating about an asset with a value of 100. In the certainty legal regime the law is such that each side is entitled to 50% of the asset. In other words, each side has a 100% chance to receive 50. Hence the payoff function of each side, in money is $1 \cdot 50$. In contrast to this, in the uncertainty legal regime each side has a 50% chance to gain all and 50% to gain nothing, which means that each side has a 50% chance to gain 100, and 50% to gain 0. Hence, the payoff function of each side, in money, is $0.5 \cdot 100 + 0.5 \cdot 0$.

We can easily see that the expected judgment of each side in the two cases is equivalent; in both cases the expected judgment will award 50. However, the variance of the judgment in each regime is different: in the certainty regime the variance is 0. However, in the uncertainty regime the variance is 50^2 .

We know that approximately 95% of the cases end in settlements. Therefore, let us see which settlement we are going to have in each regime. In the certainty regime, each side knows that there is a 100% chance that he or she is going to win 50 in a trial, therefore, neither of them is going to agree to any settlement that awards less

than 50. The threat point of each side is 50. Therefore, the only possible settlement is (50, 50); i.e., the bank is going to receive 50, and the customer is also going to receive 50.

In contrast to this, in the uncertainty legal regime, the partition of the judgment is $0.5 \cdot 100 + 0.5 \cdot 0$. The threat point of the risk-neutral party, the Bank, will continue to be 50; for the bank, the value of the lottery of the trial is the expected judgment, which means 50. However, for the risk-averse side, the customer, the value of the trial is lower than that of the expected judgment. He or she prefers a lower but certain sum of money than the expected outcome of the risk lottery. Let us assume that the value of the trial for the customer is 25¹. This means that the customer's threat point is 25; the minimum sum of money that the customer will agree to receive in a settlement is 25. We can see that now the threat points of the Bank and the Customer are 50 and 25. Therefore, the surplus is 25. Let us assume that they are going to share the surplus equally, giving each side 50% of it. This leads to an expected settlement of 62.5, 37.5 in favor of the risk-neutral side – the bank.

We can see that when we shift from a certainty legal regime to an uncertainty legal regime, we change from a settlement of 50, 50 to a settlement of 62.5, 37.5 in favor of the risk neutral, the bank. In other words, the shift from the certainty legal regime to the uncertainty legal regime transfers wealth of 12.5 from the risk-averse to the risk-neutral side – from the customer to the bank. This is the regressive effect of legal uncertainty.

We assumed that the Bank and the Customer are going to share the surplus 50-50.

However, a more realistic assumption would be that the bank is going to get a higher stake of the surplus. This is because the bank can offer a credible 'take it or leave it'



¹ It is the case, when the utility function of money is $y=x^{0.5}$ and the initial wealth of the customer is 0.

proposal to the customer and it has this power because it is a repeat player. A repeat player can gain a reputation of being a tough bargainer, who therefore has a strong interest in carrying out his or her threats. This means that the bank has a strong interest in not improving its take it or leave it proposal, which makes this a credible proposal. In this state of the world, the bank will offer the customer only epsilon (ϵ) of the surplus, and the settlement will be $(75 - \epsilon, 25 + \epsilon)$ in the favor of the bank. This time the shift from a certainty legal regime to an uncertainty legal regime transfers a wealth of 25 from the customer to the Bank. Thus, in a world in which the risk-neutral side is also a repeat player the regressive effect will be even stronger.

Let us now present this in a table:

| Mechanism for sharing the surplus | Settlement in the certainty legal regime | Settlement in the uncertainty legal regime | Delta |
|-----------------------------------|--|--|-------|
| Equal sharing | 50,50 | 62.5, 37.5 | 12.5 |
| Take it or leave it proposal | 50, 50 | 75, 25 | 25 |

The Theoretical Explanation of the Regressive Effect

Legal uncertainty imposes risk on the parties, and they are interested in neutralizing this risk. The mechanism for neutralizing this risk is the settlement. During the settlement, each side actually buys an insurance policy from the other side; the 'give and take' of this insurance takes place in conditions of bilateral monopoly.

When one side is risk averse and the another side is risk neutral, the risk-averse side wants this insurance and is ready to pay for it, whereas the risk-neutral side does not.

This means that the risk-neutral side actually sells an insurance policy to the risk adverse side during the settlement. It is important to remember that the risk neutralizing transaction takes place under conditions of bilateral monopoly, which means that the risk-neutral side sells the insurance policy to the risk-adverse side at a monopolistic price, and this leads to the regressive effect of legal uncertainty.

The higher the legal uncertainty, the higher the risk, and, therefore, the insurance policy becomes more attractive for the risk-averse side, i.e., he or she will agree to pay more in order to neutralize the legal risk via the settlement. On the other hand, the risk-neutral side is not sensitive to the increase in legal uncertainty, will not agree to pay anything in order to neutralize a legal uncertainty, whether higher or lower.

The consequence is that legal uncertainty lowers the threat point of the risk-averse side, whereas it does not change that of the risk-averse side. Thus, the higher the legal uncertainty, the less the risk-averse is going to receive in the settlement, and the more the risk-neutral side will receive. The higher the legal uncertainty, the more regressive the settlement.

When one side is more risk averse than the other, the more risk averse will be more sensitive to the legal uncertainty, which means that the more risk-averse side will agree to pay more for the insurance than the less risk averse. This means that legal uncertainty has differing impacts on people who relate differently to risk: the more risk averse the person, the higher the sum of money he or she is ready to pay in order to neutralize the risk. This means that legal uncertainty lowers the threat point of a person according to his/her risk-aversion level: the greater the risk aversion, the greater the reduction. Thus, firstly, the more risk averse the customer, the lower will be the settlement he/she achieves with the bank. Secondly, let us examine what will happen when one side is more risk averse and the other is less risk averse? Let us assume that the more risk averse is getting a_m from the surplus. When we shift from a certainty legal regime to an uncertainty legal regime, the gap between the threat point of one side in the certainty legal regime and his/her threat point in the uncertainty legal regime is his/her insurance premium that this side is ready to pay. Let us represent this premium by P . P_m is the premium of the more risk averse, and P_l is the premium of the less risk averse. The proposition that in a certain case, legal uncertainty leads to a transfer of wealth from the more risk averse side to the less risk averse will be valid if, and only if: $P_m/P_l > a_m/(1-a_m)$. Hence, if they are going to divide the surplus equally, the side whose insurance premium is lower is interested in increasing the legal uncertainty.

During our discussion, we assumed that the settlement was the only way to neutralize the legal uncertainty. Why is this an important assumption? In a world in which there is no transaction cost, the risk averse – the customer – can sell his/her suit to a litigation firm, and with perfect competition, will get a price that is equivalent to the

expected value. This is so since it is worth 50 to the litigation firm, which is risk neutral; there is no transaction cost and there is also a perfect competition, so the price will be 50; if one litigation firm refuses to pay more than 49, another firm will agree to pay more. This means that if there is no transaction cost, the regressive effect of legal uncertainty will be neutralized. This leads us to the question of why our assumption is reasonable. First, potentially there are two important market failures: asymmetric information and moral hazard. Asymmetric information means that one of the parties in the trial, who wants to sell his/her suit to a litigation firm, knows more than this litigation firm what the expected judgment is. He/she knows some of the claims that the other side is going to raise, and he/she cannot refute that he/she does not disclose to the litigation firm any optional claim or evidence of the other side. The second potential market failure is a moral hazard: after the person sold his/her suit, he/she will have no interest in cooperating with the litigation firm. In addition, there are of course other transaction costs, such as time, information collection, etc. The second reason that our assumption that suits cannot be sold is reasonable, is that the traditional doctrine of champerty forbids such trade. This doctrine prevents the risk-averse side from buying an insurance policy from a litigation firm at a competitive price rather than at a monopolistic price.

In cases in which there is no transaction cost, so that the transaction with the litigation firm would be established, the existence of the regressive effect depends on the champerty. In other words, in such cases there will be no regressive effect unless the champerty is valid. Thus, in fact, in those cases the champerty is a sine qua non for the regressive effect of legal uncertainty. I think, therefore, that in light of the regressive effect, we can also advance a strong (but not necessarily a conclusive) argument for cancellation of the champerty.

Which group is more risk averse?

We have now shown that legal uncertainty leads to a transfer of wealth from the more risk-averse side to the less risk-averse one, let us ask which groups are more risk averse. I will show that rich people are more risk averse than poor people and that men are at least perceived as more risk averse than women. This means that legal uncertainty leads to a transfer of wealth from poor people to rich people, and also from men to women. I will then show also that, according to the Prospect Theory, plaintiffs are more risk averse than defendants, which means that legal uncertainty also transfers wealth from defendants to plaintiffs.

The Class Regressive Effect

Poor people are more risk averse than rich people, therefore, legal uncertainty leads to a transfer of wealth from poor people to rich people. Why are poor people more risk averse than the rich? According to the Expected Utility Theory, the risk approach depends on two factors. The first is the personality of the individual; different people have different approaches to risk, even if they have the same wealth. The second factor, which is the one that concerns us, is the wealth factor: the less wealth a person possesses, the more risk averse he/she is.

The rationale of this proposition of the Expected Utility Theory is very simple. The proportionality between the stake in a lottery and the wealth of a poor person is much bigger than that between the same stake and the wealth of a rich person. The "lottery stake", which in our case is the sum concerned in the trial, is much more significant to the poor person than to the rich one, and the risk in the trial is much more significant

to the poor person to the rich one. Thus, a poor person is more sensitive to this risk and is, therefore, more risk averse. He/she will agree to pay more in order to neutralize the legal uncertainty and, therefore, his/her minimal acceptable settlement is much lower than that of the rich person.

So let us now be more mathematical and show what is the minimal acceptable settlement of a person as a function of her wealth, in a trial in which he/she has a 50% chance to gain 0 and a 50% chance to gain 100. We assume that his/her utility function from money is: $U = x^{0.5}$.

After the lottery (i.e., trial) there is a 50% chance of having $100 + w$, where w represents his/her initial wealth, and a 50% chance of having $0 + w$. If he/she wins the trial, his/her utility, in this state of the world, will be that from his/her initial wealth + the sum that was gained. This means that his/her utility will be $(100 + w)^{0.5}$. If he/she loses the trial, his/her utility, in this state of the world, will be only that from his/her initial wealth, w , which means that his/her utility will be $(w)^{0.5}$. We can see that there is a 50% chance that his/her utility will be $(100 + w)^{0.5}$ and a 50% chance that it will be $(w)^{0.5}$. Hence, his/her utility in the state of the world of the trial will be $0.5(100 + w)^{0.5} + 0.5(w)^{0.5}$. The minimal settlement (ms) he/she is going to accept will be one, which lead him/her to a state of the world, in which his/her utility is equivalent to that in the state of the world of the trial. His/her utility in a state of the world of minimal settlement is $(w + ms)^{0.5}$. Therefore, in order to determine his/her minimal settlement we should now equalize his/her utility in a state of world of trial to that in a state of world of minimal settlement, which means:

$$(w + ms)^{0.5} = 0.5*(w + 100)^{0.5} + 0.5*w^{0.5}$$

$$ms + w = 0.25(100 + w) + 2*0.25(100 + w)^{0.5}*w^{0.5} + 0.25*w$$

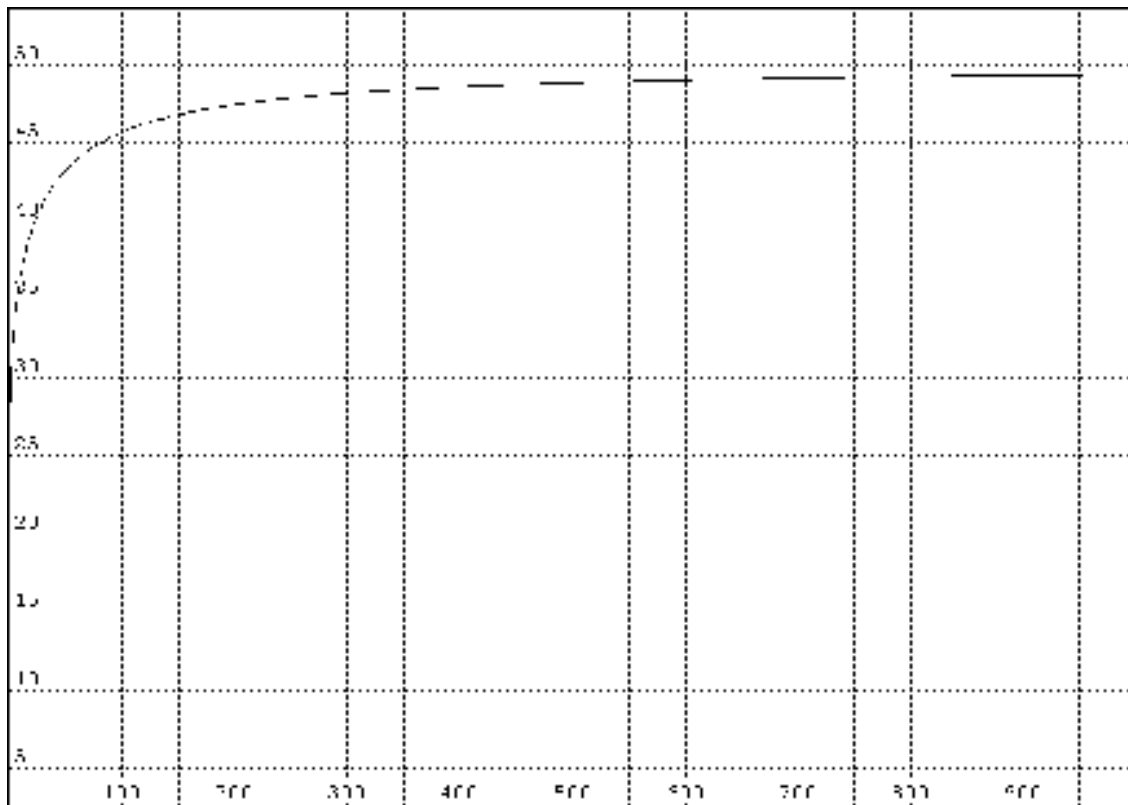
$$ms + w = 25 + 0.5w + 0.5[w(100 + w)]^{0.5}$$

$$ms = 25 - 0.5w + 0.5[w(100 + w)]^{0.5}$$

So let us now show in a table what is his/her minimal acceptable settlement as a function of his/her initial wealth:

| Initial wealth | Minimal acceptable settlement |
|----------------|-------------------------------|
| 0 | 25 |
| 5 | 33.96 |
| 10 | 36.58 |
| 20 | 39.5 |
| 30 | 41.2 |
| 40 | 42.4 |
| 50 | 43.3 |
| 80 | 45 |
| 100 | 45.7 |
| 1,000 | 49.4 |
| 10,000 | 49.938 |
| 100,000 | 49.993753 |

And let us now show the minimal accepted settlement as a function of the initial wealth in a graph:



We can see easily from the table and the graph that when the initial wealth is lower, then the minimal acceptable settlement is also lower. This means that the poorer side is more sensitive to legal uncertainty. When we shift from a certainty legal regime to an uncertainty legal regime, there is a positive correlation between the reduction in the threat point of each side and that side's initial wealth. This explains why legal uncertainty leads to a transfer of wealth from poor people to rich people.

Another way to explain why poor people are more risk averse than rich people is that the latter can spread their risks, so that when someone litigates frequently his/her risk is much lower; the variance of his/her portfolio is reduced, according to the Rule of Big Numbers.

However, the conclusion that legal uncertainty leads to a transfer of wealth from poor people to rich people has an exception. It is in the case of bankruptcy. Then the bankrupt becomes a risk lover; he/she has the "power of no power". If the bankrupt has debts of 60, and the expected sum of money to be gained in a trial is 50, then he/she prefers the uncertainty legal regime, in which there is 50% chance of gaining 0 and a 50% chance of gaining 100, to a certainty regime in which there is a 100% chance of gaining 50. This is because, in the certainty regime he/she is going to gain 50, all of which will go to the creditors. In contrast to this, in the legal uncertainty regime, there is a 50% of gaining 100, of which the creditors will receive 60, while the bankrupt remains with 40. This means that whereas his/her claim is worth 0 in the certainty regime; in the uncertainty regime the claim becomes equivalent to a lottery in which there is a 50% chance of gaining 40, and a 50% chance of gaining 0. Our conclusion is that a bankrupt prefers legal uncertainty. However, it is important to remember that bankrupts are usually insolvent corporations. This means that stock owners prefer legal uncertainty. In addition, usually before people become bankrupt, they received allowances, and rich people are more likely to receive allowances, so the majority of bankrupts are firms or rich people who lost their money.

The Gender Regressive Effect

In this section we will show that according to common belief in Economics Research, women are more risk averse than men. If this is a true belief, it is clear why legal uncertainty leads to a transfer of wealth from women to men. If it is only a false, stereotype-based belief, then legal uncertainty still leads to a regressive transfer of wealth from women to men. This is because the litigators, who are also products of

their culture, are expected to maintain this belief. Hence, women are expected to receive lower offers from them.

There are a number of studies that have shown that women are more risk averse than men. For example, Jiankopol and Bernasek checked the investment portfolios of unmarried women and unmarried men, and found that those of men were more risky. Jonker, Ferreri-Carbonell and Hartog examined the minimal sums of money for which man and women, respectively, would agree to exchange their lottery tickets, and found that women would agree to accept lower sums. Hersch examined the daily decisions of men and women that signal their approach to risks. She found that women take less risky steps in decisions concerning smoking behavior, seat belt using, preventative dental care measured by teeth brushing and flossing, but take more risky steps in decisions concerning exercising.

If we accept the proposition of the above studies, that women are more risk averse than men, it is clear why legal uncertainty has a gender-regressive effect. Legal uncertainty leads to a transfer of wealth from more risk averse to less risk averse, and women are more risk averse than men. Hence, legal uncertainty leads to a transfer of wealth from women to men.

However, it can be claimed that the proposition of these studies, i.e., that women are more risk averse than men merely reflects a false chauvinistic stereotyping of women as being more risk averse, as was claimed, for example, by Schubert, Brown, Gysler and Brachinger. The existence of this false or true stereotype can be studied also from the research of XXX. So let us assume that this claim that women are more risk averse than men is really based on a false stereotype.

Now I will explain, why legal uncertainty still has a regressive gender effect. In an uncertainty regime women are going to receive lower offers than men from a litigator

who believe this false stereotype. It is reasonable to think that the minds of the majority of the litigators are not free of this stereotype; they also believe that women are more risk averse than men. In our example, in the uncertainty legal regime the litigator of the bank is going to give a woman customer a lower offer than a man, even if the man and the woman have the same amount of wealth. This is because the litigator assumes that a woman customer is less risk averse than a man, and therefore will accept a lower offer. In contrast to this, in a certainty legal regime, the litigator will make the same offer to this man and to this woman. This is because, in a certainty regime the minimal acceptable settlement does not depend on the degree of risk aversion. The conclusion is that legal uncertainty has a gender regressive effect regardless of the truth of the stereotype.

Another interesting prediction that arises from the regressive effect, and which we can study, is that in an uncertainty legal regime women are going to be excluded from the litigation market; they will be excluded from a litigator position. This is because they are going to receive lower offers, and therefore have lower achievements than men, a situation that will motivate them to leave this market under a legal uncertainty regime.

Another prediction is that in an uncertainty legal regime litigators will develop a reputation of being risk neutral, which would lead to a macho and controversial culture in the advocacy profession.

Conclusion

We have seen that legal uncertainty stimulates the transfer of wealth from risk averse to risk neutral people. This transfer is exercised via the settlement. Since poor people are more risk averse than rich people, legal uncertainty transfers wealth from the poor to the rich. Since women are at least perceived as being more risk averse than men,

legal uncertainty transfers wealth from women to men. The conclusion is that legal uncertainty has a class-regressive effect and also a gender-regressive effect.