Legal uncertainty as a welfare enhancing screen

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ABSTRACT

Consider legal uncertainty as uncertainty about the legality of a specific action. In particular, suppose that the threshold of legality is uncertain. I show that this legal uncertainty raises welfare. Legal uncertainty changes deterrence in opposite directions. The probability of conviction increases for firms below the threshold, while the probability of conviction decreases for firms above the threshold. Hence, legal uncertainty acts as a welfare enhancing screen and increases welfare. Legal uncertainty discourages some actions with low private benefits, while it encourages other actions with high private benefits.

1. Introduction

Legal uncertainty is prevalent given the complexity of many legal procedures. With legal uncertainty, I refer here to situations in which it is unclear ex ante whether a specific action is legal.1 Hence, when taking an action, firms do not know with certainty whether courts or enforcement authorities judge this action to be legal. For example, assessments of efficiency defenses differ or it is uncertain which evidence will be allowed. Alternatively, enforcement authorities make measurement errors or there are different, possibly contradicting procedures applying to a case. Previous literature has shown that legal uncertainty might deter the wrong actions — over-deterring socially beneficial actions, while under-deterring socially detrimental ones.2 Thus, legal uncertainty decreases welfare and should be avoided whenever possible.

My main result shows that legal uncertainty can increase welfare — contradicting conventional wisdom. Legal uncertainty allows mitigating restrictions of enforcement authorities, in particular, ignorance of firms' private information. Enforcement authorities can use legal uncertainty as a welfare enhancing screen. Consequently, legal uncertainty can make a norm more selective and increase social welfare.

1 This is similar to the notion of D'Amato (1983).
This reasoning applies to many settings. As it is impossible to list all of these settings, I provide just some examples here. Think about pollution thresholds in environmental law or choosing the right transfer pricing in tax law. In privacy law, there are uncertain privacy thresholds for social networks and other internet businesses. Copyright and patent law also contain uncertain thresholds of originality for works to be eligible for protection. It also extends to excessive risk loading by financial institutions or accounting violations. In antitrust, price reductions might reflect lower costs or an attempt at predatory pricing. Finally, deals of patent-holders with generic drug makers to avoid “Paragraph IV” challenges, bidding patterns in procurement contests or standardization efforts might have beneficial effects or be part of some collusive agreement to harm other market participants.

In all these settings, externalities and private benefits of a specific action vary depending on circumstances. Circumstances reflect size, scale, magnitude, severity or other aspects of the action. Enforcement authorities cannot perfectly distinguish between these circumstances and observe only a noisy signal about circumstances. Enforcement authorities choose optimal policies by setting a threshold of legality. Then firms decide whether or not to pursue the controversial action. Firms know circumstances and private benefits, but not the enforcement authorities’ signal. Finally, enforcement authorities impose penalties on firms that are above the policy threshold according to the authorities’ signal.

For the intuition, suppose there were legal certainty and no noise in the enforcement authorities’ signals about circumstances. Then all firms below the policy threshold were active – no matter how small their private benefits. All firms above the policy threshold were deterred for sufficiently high penalties – no matter how large their private benefits. With legal uncertainty, some firms cannot fully anticipate whether they are above or below the policy threshold according to the enforcement authority’s signal. In particular, if a firm is close to, but below the policy threshold, legal uncertainty implies that the firm is penalized with some probability. Therefore firms with low private benefits do not take the action. Legal uncertainty deters them. If a firm is close to, but above the policy threshold, legal uncertainty implies that the firm is not penalized with some probability. Hence, firms with high private benefits take the action. Legal uncertainty encourages them to take the action. Therefore, legal uncertainty increases deterrence for firms below the threshold and decreases deterrence for firms above the threshold. An optimal policy threshold implies that both effects of legal uncertainty on deterrence increase welfare. Consequently, this kind of legal uncertainty acts as a welfare enhancing screen.

Consider a real-world example that will guide us through this paper. Vertical restraints, like exclusive dealings, are prohibited in the European Union under Article 101 (TFEU), formerly Article 81 (EC). Due to a Block Exemption Regulation, however, this rule does not apply if market shares of involved firms are below 30%. Thus, circumstances could equal market shares. Then, the policy threshold is 30% market shares. The European Commission can impose penalties on firms in violation of this article. Although the European Commission gives guidelines how market shares are determined, it is extremely difficult to predict correctly the market share determined by competition authorities. The causes are discrepancies in the definition of the relevant market, information asymmetries or imprecision in the measurement of sales, and other factors. Therefore it is plausible to assume that firms know their market shares and private benefits, but not the Commission’s signal, i.e., its estimate of their market shares. This creates the kind of uncertainty analyzed in the model. Thus, a firm with market shares of 25% anticipates with some probability an estimate above 30% and to pay a penalty. On the contrary, a firm with market shares of 35% anticipates with some probability an estimate below 30% and not to pay a penalty. According to my model, this legal uncertainty can be socially beneficial.

The remainder of the paper is organized as follows. Section 2 discusses the relevant literature. Section 3 sets up the model. Section 4 analyzes the welfare effects of legal uncertainty. Section 5 provides a numerical example to demonstrate the significance of legal uncertainty. Finally, Section 6 discusses possible limitations and concludes. All proofs are gathered in Appendix A.

2. Related literature

The literature has considered both costs and benefits of legal uncertainty. Legal uncertainty reduces deterrence and makes it more difficult or impossible to achieve optimal deterrence. For example, Polinsky and Shavell (1989) demonstrate that legal uncertainty lowers deterrence, because expected sanctions are reduced and less suits are brought to court. Schinkel and Tuinstra (2006) analyze firms’ strategic responses to legal uncertainty in competition law. They show that both type I and type II errors lower deterrence. Png (1986) and Polinsky and Shavell (2000, Section 8) show how to adjust sanctions for type I and type II errors. Lando (2006) discusses whether type I errors influence deterrence.

These five papers assume that the same errors apply to everyone ruling out any effects on differential deterrence. Differential deterrence means that more harmful actions are more likely to be deterred than less harmful actions. In addition, the conclusions of these five papers are valid in the absence of enforcement costs. On the contrary, Besanko and Spulber (1989) determine optimal sanctions and auditing probabilities that both depend on quantities produced by firms. Enforcement authorities cannot observe firms’ costs. Then it can be optimal to tolerate collusion by low-costs firms if auditing costs are sufficiently large. Hence, a (deterministic) type II error can be optimal, as auditing costs make lower deterrence optimal given an upper bound on sanctions. Between these two extremes of constant errors as in the first five papers and fully variable errors as in Besanko and Spulber (1989), Calfee and Craswell (1984) and Craswell and Calfee (1986) consider a given distribution of errors around the policy threshold. This legal uncertainty causes type I and type II errors independent of enforcement costs. In addition, there are effects on differential

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4 An alternative source of legal uncertainty for vertical restraints are assessments of efficiency defenses. Then circumstances would measure the amount of efficiencies of an action.
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