The implications of imperfect information: Rule-making at the Court of Justice of the European Union

Philipp A. Schroeder

Abstract In the context of preliminary reference procedures, the Court of Justice of the European Union (CJEU) routinely clarifies national courts' questions on the application of Union law in EU member states. In this research note, I develop a formal theoretical model explaining why the CJEU occasionally jeopardises uniform application and leaves important aspects concerning the interpretation of Union law and its implications for national rules to member state institutions. The model expands on existing accounts of the CJEU's decision-making and shows under which conditions the Court's reliance on member states' information about the likely effects of its rulings leads to choices of rules that leave both member states and the Court worse off.

The Court of Justice of the European Union (CJEU) plays a critical role in the implementation of Union law in EU member states. When national courts are uncertain about the correct interpretation of primary and secondary Union law or question the validity of secondary Union law, they may (and in some instances, must) refer their questions for a preliminary ruling to the CJEU. The CJEU's subsequent rules on the interpretation and validity of Union law are authoritative. This system known as preliminary reference procedures serves to "ensure that the application of EU law remains constant and uniform".[1]

Contrasting preliminary references' expressed aim of fostering uniform application of Union law, recent evidence suggests that the CJEU frequently opts for rules allowing Member State institutions room for discretion in its implementation. Zglinski analysed a sample of the CJEU's case law on intra-European freedom of movement between 1974 and 2003, showing that determinate rules outlawing national legislation and administrative practices are complemented by instances of the Court "refraining from making certain legal and regulatory assessments, deferring them to Member State institutions instead".[2]

1. Cramer et al. 2016, 14.
2. Zglinski 2018, 1342.

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When the CJEU leaves important aspects of the interpretation of Union law and its implications for member states' legislative acts and administrative practices to the discretion of national courts and legislatures, the Court accepts that uniform application of Union law is at risk.

Consider the following illustrative example of the CJEU's response to a preliminary reference concerning the compatibility of national Sunday trading bans with Treaty articles prohibiting quantitative restrictions between member states. In *Torfaen Borough Council v B&Q plc*, the CJEU found that national rules banning Sunday trading are justifiable on public interest grounds, adding that it is ultimately up to the national courts to determine "whether the effects of such national rules exceed what is necessary to achieve the aim in view".[3] Jarvis notes that "the Sunday trading saga is often painted as an example of a true fragmentation of justice as different courts in various parts of England and Wales came to opposite conclusions as to the compatibility of the Shops Act with Article 30 of the EC Treaty".[4]

Scholars of judicial politics have long wrestled with the puzzling phenomenon of courts deliberately crafting ambiguous rules that leave room for interpretation, despite knowing that such rules are prone to inconsistent application.[5] The CJEU's choice to leave important aspects concerning the interpretation and implications of Union law to the discretion of member states' institutions is an example of this phenomenon. Why would the CJEU tasked with ensuring the uniform application of Union law opt for rules that harbour the potential of achieving the opposite?

I introduce a formal theoretical model that identifies under which conditions the CJEU chooses rules providing member state institutions with discretion regarding the interpretation of Union law. The model centres on the CJEU's uncertainty about the future effects of its case law in member states. Coupled with the doctrines of direct effect and supremacy, the CJEU's jurisprudence often places pressure on member states to ensure that their national legislation and administrative practices conform with Union law.[6] The existing literature has provided evidence consistent with an expectation that the CJEU "is a strategic actor that is sensitive to the preferences of EU member governments",[7] and carefully avoids placing pressure on established national rules and practices that would cause member state governments to buckle (e.g. in the form of non-compliance or legislative override of the CJEU's rules).[8]

I argue that the CJEU faces a strategic choice of when to opt for rules that prioritise uniform application of Union law, and when to delegate aspects concerning the interpretation of Union law to member state institutions to ease constraints on national policies. The theoretical model introduced in this research note expands on existing

3. *Torfaen Borough Council v B&Q plc*, Case C-145/88 (1989), par. 15.
4. Jarvis 1995, 458.
5. See Spriggs 1997; Staton and Vanberg 2008.
6. See for example Alter 1998; Garrett, Kelemen and Schulz 1998; Schmidt 2018.
7. Garrett, Kelemen and Schulz 1998, 150.
8. Carrubba, Gabel and Hankla 2008; Larsson and Naurin 2016; Garrett, Kelemen and Schulz 1998.

game-theoretic accounts of the CJEU's decision-making,[9] and explicitly models the effects of the asymmetric distribution of information between the CJEU and member states (i.e. member states are better informed than the Court about the effects of a rule in their national contexts), and the costs member states face when submitting information to the Court during case proceedings.

The model yields a variety of empirically testable expectations on questions that have featured prominently in the recent literature on both the CJEU and member states' decision-making (including member states' choice not to engage with cases considered by the CJEU).[10] The research note also engages in a ongoing debate concerning the CJEU's role in European integration. Prominent research suggests that the CJEU has been able to employ the law as a "mask and shield", promoting European integration beyond what member states would have envisioned.[11] More recent research suggests that member states have been successful in reigning in the CJEU's pro-integration activism and exercise at least some degree of control over the Court's decision-making[12]. The model shows that member states' apparent lack of engagement with the CJEU's decision-making may not necessarily reflect member states overlooking the "quiet revolution" driven by the CJEU's case law,[13] but is rooted in their strategic behaviour. However, the model shows that when member states choose not to provide the CJEU with information about their national contexts, the CJEU is prone to choose 'inefficient' rules that leave both member states and the Court worse off.

The research note proceeds as follows. In the next section, I briefly review existing game-theoretic accounts of the CJEU's decision-making and outline how the model presented here expands on these accounts. The third section introduces the formal model and establishes the model's equilibrium predictions. The final section briefly discusses the model's empirical implications and considers its current limitations.

Strategic decision-making at the CJEU

Several prominent studies have challenged the narrative that the CJEU, "tucked away in the fairyland Duchy of Luxembourg",[14] has been an unbridled driver of European integration, escaping oversight from member states. These studies suggest that the CJEU is instead a strategic actor, well aware that member states play an important role in the implementation of its jurisprudence and have tools at their disposal to reign in the Court's decision-making, including treaty revisions amending the CJEU's jurisdiction and the override of the Court's case law through the EU's legislative

9. Garrett, Kelemen and Schulz 1998; Larsson and Naurin 2016.
10. See for example Naurin and Dederke 2018; Carrubba and Gabel 2015.
11. Burley and Mattli 1993; Blauberger and Martinsen 2020.
12. Larsson and Naurin 2016; Carrubba, Gabel and Hankla 2008; Carrubba and Gabel 2015.
13. Weiler 1994.
14. Stein 1981, 1.

process.[15] In these accounts, the CJEU anticipates how member states would respond to an adverse decision (e.g. a decision challenging long-established national legislation or practices) and backs down from such choices whenever the Court's anticipated costs of an adverse decision outweigh its benefits.

Garrett, Kelemen and Schulz offer a model of repeated interactions between the CJEU and member states.[16] Upon issuing a decision that challenges national rules, the CJEU observes member states' reactions to its rulings and updates its beliefs about the member states' likely response for the next iteration of their interaction. Crucially, their model assumes that member states do not always face incentives to challenge an adverse decision. Garrett, Kelemen and Schulz argue that "[a]ny time a member government rejects an ECJ decision, this not only undermines the legitimacy of the EU legal system, but also threatens to earn for the government a reputation as an actor that does not play by the rules".[17] Member states know that sufficiently clear legal rules defining the boundaries to national legislation and administrative practices are essential to the functioning of the EU's internal market and to fill the gaps in the 'incomplete contract' of the EU treaties.

Carrubba, Gabel and Hankla, and Larsson and Naurin offer a similar account of the CJEU's strategic decision-making.[18] Their models suggest that the CJEU does not have to wait until after its ruling to learn about member states' preferences, and centre on the fact that member states have an opportunity to supply the CJEU with information clarifying "specific national circumstances which the court should take cognisance of in its process of adjudication".[19] Observations submitted by member states during case proceedings allow governments to argue their preferences with respect to rules limiting national sovereignty and allow the Court to identify scenarios in which non-compliance or legislative override of an adverse decision is likely. Carrubba, Gabel and Hankla, and Larsson and Naurin provide strong empirical evidence suggesting that the CJEU indeed responds to the information submitted by member states, opting to back down from rules challenging member state practices amid the spectre of an adverse response.

In the following I develop a formal theoretical model that incorporates the key elements of the accounts discussed above. Called upon to clarify Union law and its implications for member states, the CJEU faces a choice between a sufficiently precise legal rule that fosters uniform application of Union law within and across member states, and a sufficiently flexible legal rules that would allow member states to protect their current domestic policies at the risk of non-uniform application. Following the argumentation of Garrett, Kelemen and Schulz, member states may not always favour a flexible rule over a determinate rule, but the Court is uncertain about which type of

15. Larsson and Naurin 2016.
16. Garrett, Kelemen and Schulz 1998.
17. 156.
18. Carrubba, Gabel and Hankla 2008; Larsson and Naurin 2016.
19. Cramer et al. 2016, 15.

scenario it is facing. Following the argumentation of Carrubba, Gabel and Hankla, as well as Larsson and Naurin, member states may supply the CJEU with information about their preferences. Crucially, the model developed below captures the fact that the submission of observations to the Court is costly for member states (i.e. engaging with a case at the CJEU and preparing often complex legal documents involves at least some effort for member states).

The model's predictions mirror the theoretical expectations defininded by Carrubba, Gabel and Hankla, and Larsson and Naurin, expecting the CJEU to inform its choice of legal rules through observations submitted by member states. However, beyond reinforcing these expectations, the model identifies under which conditions member states choose not to submit observations to the Court and how the latter chooses legal rules when no information is supplied by member states. For now the model assumes perfect information for member states (i.e. the member states know how the Court will respond to their own actions). In a future draft of this research note, this assumption should be relaxed, which would allow the model to make predictions about a possibly far more interesting facet of the strategic interaction between the CJEU and member states: member states choosing to submit observations but the CJEU opting to ignore the provided information.

The model

Consider the extensive form game of imperfect information displayed in Figure 1. The game involves three players, Nature (N), a State (S) and a supranational Court (C). At the outset of the game, Nature selects the State's type $\Theta \in \{\theta_A, \theta_B\}$, with

$$\Theta = \begin{cases} \theta_A & \text{with probability } p \\ \theta_B & \text{with probability } 1 - p \end{cases}$$

The players' payoff structures are conditional on the State's type and are discussed in detail below. For now, it is sufficient to know that Nature's draw in essence captures that the Court may either face a State preferring to keep its current domestic policies in place over the uniform application of Union law (i.e. $\Theta = \theta_A$), or otherwise (i.e. $\Theta = \theta_B$). Unlike the State itself, the Court is uncertain about the State's type, but has commonly known prior beliefs about which type it is facing (with $Pr(\Theta = \theta_A) = p$). Upon observing its type, the State chooses its response $m \in \{m_A, m_B, m_0\}$. When $m = m_A$, the State submits an observation to the Court, signaling its type θ_A (i.e. preferring to protect its domestic policies over uniform application of Union law). When $m = m_B$, the State signals its type θ_B. Whenever $m = m_0$, the State provides the Court with no information about its type.

Following the State's choice, the Court decides between two kinds of rules interpreting supranational law and its implications for the State's policies. Rule a remains sufficiently vague to leave the State room for interpretation to preserve its current policies, whereas rule b leaves no such discretion and the Court itself fully

specifies supranational law's implications for the State's policies. Following the Court's choice, the game ends and the players' payoffs are revealed.

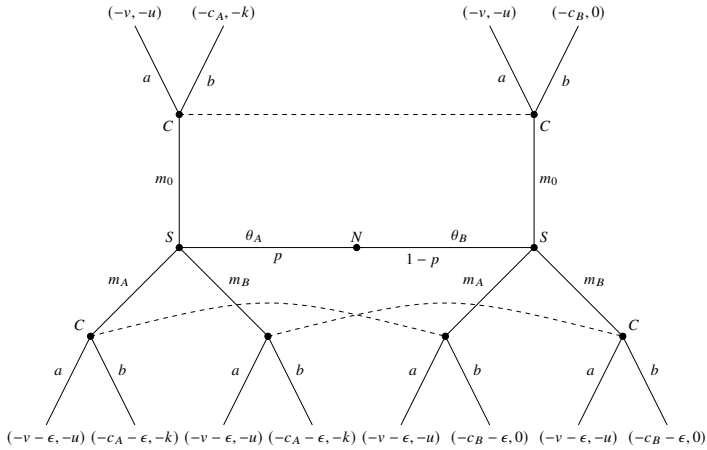
Consider the State's payoffs first. Whenever $\Theta = \theta_A$, the Court's choice of rule b places pressure on domestic policies and the State pays a cost of c_A, reflecting the efforts required to bring its national legislation and administrative practices in line with the Court's interpretation of supranational law. Should the Court choose a more flexible rule a instead, pressure on domestic policies is eased but the State pays a cost of v, reflecting the negative effects of non-uniform application of supranational law.[20] Given $\Theta = \theta_B$, the State's payoff structure is almost identical, paying a cost v reflecting the downsides of non-uniform application should the Court choose a flexible rule a, and a cost c_B reflecting pressure on its policies whenever the Court chooses a determinate rule b.

The State and Court's strategic interaction is motivated by the assumption that $c_B < v \leq c_A$. Put simply, the game assumes that in some instances the State prefers preserving its own policies over the uniform application of supranational law (i.e. given $\Theta = \theta_A$ the State prefers a flexible rule a over a determinate rule b, and vice versa). Finally, whenever the State chooses to signal information to the Court it pays a cost ϵ for submitting an observation, reflecting its efforts to prepare often complex legal analyses and explaining its national circumstances to the Court.[21]

Now consider the Court's payoffs. Like the State, the Court values uniform application of supranational law and pays a cost u whenever it chooses a flexible rule a. Unlike its payoffs associated with rule a, the Court's payoffs from choosing a determinate rule b are dependent on the State's type. Whenever $\Theta = \theta_B$, the Court knows that the State prefers uniform application over preserving its domestic policies and the Court can safely opt for a determinate rule b without risking repercussions, hence receiving a payoff of 0. In contrast, whenever $\Theta = \theta_A$, the Court knows that opting for a determinate rule b antagonises the State and results in paying a cost k.

The cost parameter k lends itself to various interpretations. The literature reviewed above suggests that the CJEU carefully avoids overstretching member states' tolerance, knowing that rulings challenging established domestic policies may induce member states to engage in non-compliance, attempts at legislative override or curbing its competences, ultimately leaving the Court worse off.[22] Alternatively, a carefully treading Court may be motivated by purely legal considerations. All else equal, the CJEU likely prefers uniform application of Union law but is conscious that determinate rules clearly defining the implications of Union law may stoke future challenges to national legislation and practices beyond the Court's original intention.[23] The model assumes that $u < k$, hence regardless of whether one subscribes to an expectation of a Court strategically avoiding backlash from member states or motivated by choosing

20. See Garrett, Kelemen and Schulz 1998, 156.
21. Cramer et al. 2016, 15.
22. See Carrubba, Gabel and Hankla 2008; Larsson and Naurin 2016; Garrett, Kelemen and Schulz 1998.
23. See Schmidt 2018.



Notes: The payoffs for the State (S) and the Court (C) are denoted in brackets. Dashed lines indicate the Court's information set upon observing the State's action.

FIGURE 1. *Sequence of play*

appropriate rules on purely legal terms (or a combination thereof), the Court prefers rule a over rule b whenever $\Theta = \theta_A$, and vice versa.[24]

To summarise, a State keen to protect its domestic policies may not always favour uniform application of supranational law over more flexible interpretations of the implications of Union law. While the Court is uncertain about the State's preferences, the State may choose to submit information revealing its type, albeit at a cost. In the following, I identify the conditions under which this system produces appropriate rules matching national contexts—and when it fails to do so.

Equilibria

I seek perfect Bayesian equilibria (PBE) satisfying the intuitive criterion defined by Cho and Kreps.[25] In most extensive form games of incomplete information, the receiver's beliefs (i.e. here the Court's beliefs) of which type of sender (i.e. State) they are facing should the latter deviate from a particular strategy are critical to identifying stable equilibria. The intuitive criterion requires that off the equilibrium path, beliefs are concentrated on the type of senders with the greatest incentive to deviate from their prescribed strategy.

24. The assumption that $u < k$, ensuring that a flexible rule a is at times preferable over a determinate rule b, appears hardly controversial purely based on the empirical observation that the CJEU at times deliberately chooses rules granting discretion to member state institutions, suggesting that it was the most favourable among all options available to the Court.

25. Cho and Kreps 1987.

I begin my analysis by showing that no equilibrium exists in which the State chooses to misrepresents its type. In other words, the model implies that member states either invest the effort to submit an observation truthfully explaining their national circumstances to the CJEU, or choose not to engage with a case at all.

Proposition 1 No PBE satisfying the intuitive criterion exists in which the State chooses $m = m_A$ when $\Theta = \theta_B$, or $m = m_b$ when $\Theta = \theta_A$ with some positive probability.

To illustrate, consider a pooling strategy profile in which the State plays m_A (submitting an observation suggesting that it values preserving its current domestic policies over uniform application of Union law) irrespective of its actual type. Whenever the Court chooses a determinate rule b off the equilibrium path with some positive probability, the State of type θ_B has an incentive to deviate to signalling m_B. Whenever the Court chooses a flexible rule a regardless of the State's signal, both types of State have an incentive to deviate to m_0 and save their efforts of submitting information to the Court. The same reasoning applies to any separating or partial-pooling strategy profile in which the State chooses to misrepresent its private information.

It follows from Proposition 1 that any stable equilibrium to the game involves the Court's posterior beliefs $Pr(\theta_A|a) = 1$ and $Pr(\theta_B|b) = 1$. Put simply, whenever the State chooses to submit an observation, it truthfully signals its private information and the Court can perfectly update its prior beliefs about the State's type and choose the appropriate rule (i.e. rule a when $\Theta = \theta_A$ and rule b when $\Theta = \theta_B$). I proceed by showing that despite this feature of the game, no equilibrium exists in which both types of States signal their private information to the Court simultaneously.

Proposition 2 No PBE satisfying the intuitive criterion exists in which both types of States signal their private information to the Court with some positive probability.

The reason underlying Proposition 2 is that signalling their private information to the Court is costly for the State. To illustrate, consider a mixed strategy profile in which a State of type θ_A always chooses to signal m_A and a State of type θ_B chooses a mixed strategy between m_B and m_0. Following this strategy profile, the Court can perfectly update its prior beliefs for all kinds of signals it observes. Given the Court's posterior beliefs $Pr(\theta_B|m_0) = 1$ imply that the Court chooses rule b upon observing m_0, the State of type θ_B has an incentive to deviate from its mixed strategy towards a pure strategy choosing m_0 to save itself the costs of submitting an observation to the Court.[26] Generally, regardless of whether the Court chooses a pure or mixed strategy

26. The proof of showing that no equilibrium exists when the State of type θ_A chooses a mixed strategy is analogous.

upon observing m_0, the best response of at least one type of State is not to submit an observation.

This leaves us with three different kinds of equilibria to the game: (1) separating equilibria in which one type of State submits an observation to the Court, whereas the other type chooses not to, (2) pooling equilibria in which both types of States choose not to submit an observation, and (3) partial-pooling equilibria in which one type of State always chooses not to submit an observation while the other type plays a mixed strategy. I define these in the following.

Consider first a separating equilibrium in which the State of type θ_A chooses to submit an observation m_A, and the State of type θ_B chooses not to submit an observation, m_0.

Proposition 3 A PBE with a pure strategy profile $\big((m_a|\theta_A, m_0|\theta_B)(a|m_A, b|m_0)\big)$ and beliefs $Pr(\theta_A|m_B) = 1$, $Pr(\theta_B|m_B) = 1$ and $Pr(\theta_B|m_0) = 1$ exists whenever the condition $c_A > v + \epsilon$ is satisfied.

The Court's beliefs upon observing m_0 are critical to support this equilibrium. Proposition 3 shows that in light of its beliefs the Court chooses a determinate rule b whenever the State does not provide any information about its type. Hence, the State of type θ_A has an incentive to invest the effort of submitting an observation and nudge the Court to opt for a flexible rule a. However, it is worth doing so only if the costs of adjusting its current policies to fit the Court's jurisprudence outweigh the combined costs of non-uniform application of Union law and submitting an observation to the Court.

A similar separating equilibrium exists, now with the State of type θ_B choosing to submit an observation m_B, and the State of type θ_A choosing not to, m_0. Like the previous separating equilibrium, this equilibrium relies on the Court being certain about the type of State it faces when no observation is submitted and whether it is worth for the State of type θ_B to invest the effort of submitting an observation.

Proposition 4 A PBE with a pure strategy profile $\big((m_0|\theta_A, m_B|\theta_B)(a|m_0, b|m_B)\big)$ and beliefs $Pr(\theta_A|m_B) = 1$, $Pr(\theta_B|m_B) = 1$ and $Pr(\theta_A|m_0) = 1$ exists whenever the condition $c_B < v - \epsilon$ is satisfied.

Both separating equilibria require that the Court is certain about which type of State it is facing (i.e. either $Pr(\theta_A|m_0) = 1$ or $Pr(\theta_B|m_0) = 1$) should the latter provide it with no information. The following equilibria capture scenarios when the Court is uncertain about the State's type given no information is provided.

Consider next two pooling equilibria in which the State chooses not to submit an observation, m_0, regardless of its type. In these scenarios, the Court is unable to update its prior beliefs about the State's type.

Proposition 5 A PBE with a pure strategy profile $\big((m_0|\theta_A, m_0|\theta_B)(a|m_0)\big)$ and beliefs $Pr(\theta_A|m_B) = 1$, $Pr(\theta_B|m_B) = 1$ and $Pr(\theta_A|m_0) = p$ exists whenever the conditions $p > \frac{u}{k}$ and $v \leq c_B + \epsilon$ are satisfied.

This pooling equilibrium reflects an environment in which it is sufficiently likely that the Court faces a State that values its domestic policies over uniform application of Union law (i.e. $p > \frac{u}{k}$) to choose a flexible rule a when no member state submits an observation, and when the costs member states bear for non-uniform application of Union law are sufficiently low, even for a State of type θ_B (i.e. $v \leq c_B + \epsilon$).

Another pooling equilibrium exists in which neither type of State submits an observation, yet the Court now responds by choosing a determinate rule b.

Proposition 6 A PBE with a pure strategy profile $\big((m_0|\theta_A, m_0|\theta_B)(b|m_0)\big)$ and beliefs $Pr(\theta_A|m_B) = 1$, $Pr(\theta_B|m_B) = 1$ and $Pr(\theta_A|m_0) = p$ exists whenever the conditions $p \leq \frac{u}{k}$ and $v \geq c_A - \epsilon$ are satisfied.

This pooling equilibrium reflects an environment in which it is now sufficiently unlikely that the Court faces a State that values its domestic policies over uniform application of Union law (i.e. $p \leq \frac{u}{k}$). Accordingly, the Court chooses a determinate rule b when no member state submits an observation, and since the costs member states bear for non-uniform application of Union law are sufficiently high, even for a State of type θ_A (i.e. $v \geq c_A - \epsilon$), no type of State has an incentive to deviate from not submitting an observation, m_0.

What is left to show is which strategies the State and Court choose when the conditions concerning the relationship between the State's costs of non-uniform application of Union law and pressure on its domestic policies defined in Proposition 5 and 6 are not met. These scenarios are captured by the following partial-pooling equilibria.

Consider first a partial-pooling equilibrium in which a State of type θ_A chooses a signal m_0 with probability s and signal m_A with probability $1 - s$, while a State of type θ_B always chooses signal m_0. In response, upon observing m_0 the Court itself plays a mixed strategy itself, choosing a flexible rule a with probability t and a determinate rule b with probability $1 - t$. Let $s^* \equiv \frac{2kp-u-kp^2}{kp-kp^2}$ and $t^* \equiv \frac{c_A-v-\epsilon}{c_A-v}$.

Proposition 7 A PBE with a mixed strategy profile for the State playing $(m_0|\theta_A)$ with probability s^*, $(m_A|\theta_A)$ with probability $1 - s^*$, and $(m_0|\theta_B)$ with probability 1, and a mixed strategy profile for the Court $(b|m_B)$ with probability 1, $(a|m_0)$ with probability t^*, and $(b|m_0)$ with probability $1 - t^*$ exists whenever the conditions $p \leq \frac{u}{k}$, $c_A > v + \epsilon$ and $c_B \leq v - \epsilon$ are satisfied.

In the final partial-pooling equilibrium of the game, the State of type θ_A always chooses to signal m_0, while the State of type θ_B chooses signal m_0 with probability q and signal m_B with probability $1 - q$. Again, upon observing m_0 the Court opts for a

mixed strategy, choosing a flexible rule a with probability r and a determinate rule b with probability $1 - r$. Let $q^* \equiv \frac{u-kp^2}{kp-kp^2}$ and $r^* \equiv \frac{\epsilon}{v-c_B}$.

Proposition 8 A PBE with a mixed strategy profile for the State $(m_0|\theta_B)$ with probability q^*, $(m_B|\theta_B)$ with probability $1 - q^*$, and $(m_0|\theta_A)$ with probability 1, and a mixed strategy profile for the Court playing $(a|m_A)$ with probability 1, $(a|m_0)$ with probability r^*, and $(b|m_0)$ with probability $1 - r^*$ exists whenever the conditions $p > \frac{u}{k}$, $c_A \leq v + \epsilon$ and $c_B \leq v - \epsilon$ are satisfied.

The next section interprets and discusses the empirical implications of the various equilibria established above, and considers the model's current limitations.

Interpretation, discussion and limitations

The formal model developed above and its analysis are a first cut to explicitly capture the effects of the asymmetric distribution of information between member states and the CJEU, and the fact that member states face (at least some) costs for signalling their private information to the Court. For now, the model lacks a feature that likely plays an important role in the interaction between member states and the CJEU in reality: Member states are ultimately uncertain about how the CJEU would respond to their signals. In its current form, the model effectively does not allow the Court to ignore the information submitted by a member state (e.g. since the model assumes that $u < k$, the Court never chooses a determinate rule b upon observing m_A). This assumption should be relaxed in future iterations, with the model modified into an extensive form game of incomplete and imperfect information. This would allow me to derive comparative statics that show under which conditions member states submit observations that are ultimately ignored, and which factors play a role in the CJEU's decision to ignore the submitted information (with member states' costs for preparing an observation likely playing a critical role).

Nonetheless, the model in its current form has a variety of empirical implications that are unlikely to change even when the model is further modified. First, the model suggests that whenever member states submit an observation to the CJEU arguing their preferences with respect to the case before the Court and clarifying their national circumstances, they do so truthfully. Member states are strategic actors but they do not attempt to trick the CJEU into incorrect beliefs about their type, i.e. preferences and national circumstances.

Second, the model implies that overall member states and the CJEU share the same goals, albeit for different reasons. Both member states and the Court generally have an interest in the latter selecting the appropriate types of rules given member states' national circumstances (i.e. selecting a flexible rule instead of a determinate one when the latter would place too much pressure on domestic policies). However, given the signalling of information that would allow the CJEU to make an appropriate

choice is costly for member states, the Court's rule-making is prone to inefficiencies. The existence of pooling and partial-pooling equilibria in which both types of member states choose not to submit observations to the CJEU with at least some positive probability, implies that the CJEU is prone to opt for inappropriate rules, e.g. choosing a flexible rule risking uniform application despite both member states and the Court in fact preferring a determinate rule.

The partial-pooling equilibria suggest that the CJEU considers member states' costs for submitting an observation in its choice even when member states ultimately did not opt to submit them. The model predicts that in scenarios in which the CJEU's prior beliefs about member states' type suggest that a flexible rule is appropriate, the Court becomes more likely to actually opt for a flexible rule as member states' costs for submitting an observation increase. Similarly, when the CJEU's prior beliefs about member states' type suggest that a determinate rule is appropriate, the probability of the Court in fact choosing such a rule increases with the costs member states bear for submitting an observation. As in most signalling games, the costs of a sender's particular message carry weight in the decision-making of the receiver. The next step for this research note is to consider an extensive form game of incomplete and imperfect information to analyse the role of member states' costs for submitting an observation in the decision-making of both the CJEU and member states, when the latter are uncertain about the Court's response to their actions.

Supplementary Material

(This is dummy text) Supplementary material for this research note is available at <https://doi.org/10.1017/Sxxxxxxxxx>.

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Authors

Philipp A. Schroeder is a postdoctoral fellow at Umeå University's Department of Law. He can be reached at philipp.schroeder@umu.se.

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