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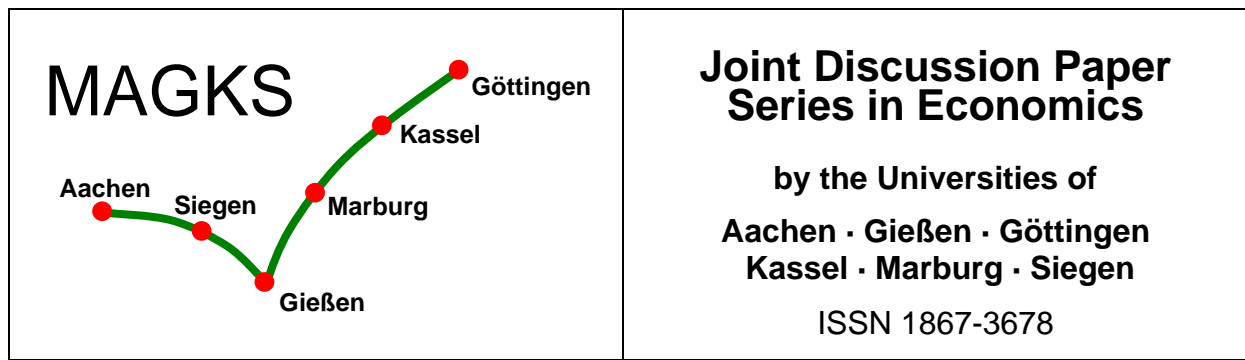
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# Does Arbitration Blossom when State Courts are Bad?

Stefan Voigt, MACIE (Philipps University Marburg) and CESifo \*

## *Abstract:*

*It is often conjectured that non-state dispute resolution blossoms when state courts are not independent or are perceived as low-quality courts. This conjecture implies a substitutive relationship between state and non-state dispute resolution. An alternative hypothesis argues that both the quality and the frequency of use of these two alternative mechanisms are complementary: societies with high-quality state courts would also be able to provide high-quality non-state dispute resolution. This is the first study that puts these hypotheses to an empirical test. It turns out that the lower the perceived quality of state courts, the less frequently conflicting firms resort to them. Second, firms in common-law countries turn away from state courts significantly more often than firms in civil-law countries. This result sheds doubt on the robustness of results generated within the legal traditions literature. Finally, in states that have created the preconditions for arbitration, businesspeople resort significantly more often to state courts. We interpret this as evidence in favor of the complementarity hypothesis.*

*Key words:* Alternative Dispute Resolution, Quality of Justice, Judicial Independence, Corruption, Private Provision of Public Goods.

*JEL classification:* H42, K42, O17.

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## **Does Arbitration Blossom when State Courts are Bad?**

### **I Introduction**

Most economists, even those who are very critical of the state, have traditionally agreed that one of the classical functions of the state is to provide an impartial judiciary that has the function not only to punish criminal behavior, but also to offer impartial third-party dispute resolution to parties who quarrel about the interpretation of contracts voluntarily entered into. This conventional wisdom can be traced back at least to Adam Smith (1776). In a seminal paper, Landes and Posner (1979) challenged that wisdom: they separate the private-good aspect of adjudication (the decision of the particular case at hand) from the public-good aspect of adjudication (the development of law via its interpretation) and conclude that private provision of adjudication is possible as long as the private-good aspect prevailed.

Over the last couple of decades, the notion of alternative dispute resolution (“ADR”) has received quite a boost. Based on the publicity that ADR receives, one gets the impression that ever more conflicts are adjudicated not by state courts, but by other (non-state) courts.<sup>1</sup> A couple of questions immediately suggest themselves: Is this a real trend that can be substantiated by hard numbers? If so, what are the reasons for the rise of ADR? In countries in which ADR is strong, is it strong across the board or confined to specific sectors, the size of the conflicting firms, the likelihood of continued interaction, etc.? And: Is ADR particularly strong where the state judiciary is particularly weak, e.g. because it takes too much time, the judiciary is perceived as corrupt or as dependent on other branches of government, etc.?

Answers to these questions might be highly policy-relevant: From previous research (Feld and Voigt 2003, 2006), it is known that the quality of the judiciary and in particular its factual independence are crucial for the growth prospects of a country. If it is impossible to substantially improve the quality of the state judiciary within a short period of time, then the creation of the preconditions for successful ADR might be a viable policy alternative.

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<sup>1</sup> Reliable numbers are, however, awfully hard to get. Serious estimates of the percentage of international contracts containing a mandatory arbitration clause range between 20 and 95% (see Voigt 2008a for precise references).

Two conflicting views of the relationship between ADR and State Dispute Resolution (SDR) can be distinguished: the first views ADR as being in high demand when SDR is bad. We call it the substitution view. Alternatively, it can be argued that ADR will only be strong if state courts function reasonably well, e.g. because enforcement of many ADR decisions still depends on state courts. We call this the complementarity view.

These two competing views are tested in a cross-country setting. Until now, most empirical studies dealing with ADR have been case studies dealing with single countries.<sup>2</sup> This paper adds to the literature by dealing with the interdependencies between SDR and ADR on a cross-country level for the first time. It turns out that the lower the perceived quality of SDR, the less frequently conflicting firms resort to SDR. Turning away from SDR occurs particularly often when the courts are not perceived as fair und impartial, as honest or uncorrupt, and as consistent in their decisions. Second, in states that have created the preconditions for non-state dispute resolution, businesspeople resort significantly more often to state courts. We interpret this result as evidence in favor of the complementarity hypothesis.

The rest of the paper is organized as follows: the next section contains a short overview of SDR, ADR, and neighboring concepts such as mediation and conciliation. Section three presents a number of theoretical arguments; our approach to empirically assess the relative importance of ADR is described in section four. The estimation approach and the results are presented in section five. Section six concludes and discusses possible questions for future research.

## **2 Forms of Dispute Resolution – an Overview**

We propose to separate state dispute resolution from non-state dispute resolution. SDR takes place if a dispute is resolved by a state servant in this capacity<sup>3</sup> relying on the power of the state to enforce its decisions even against the will of those

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<sup>2</sup> To name just a few: Hendley et al. (2000) and Frye and Zhuravskaya (2000) deal with non-state dispute resolution in Russia. McMillan and Woodruff (2000) analyze the relationship between the quality of public- and private-order dispute resolution in Vietnam, Russia, the Ukraine, Romania, Slovakia, and Poland. Galanter and Krishnan (2004) is a careful study of Indian “people’s courts” (*Lok Adalats*). Barfield (2006) describes the relationship between state courts and ADR in contemporary northern Afghanistan. Henrysson and Joireman (2007) emphasize the cost of informal property rights adjudication in Kenya. Schönfelder (2007) emphasizes the unexpectedly low use of non-state dispute resolution in Bulgaria and Croatia.

<sup>3</sup> State judges who serve as arbitrators over the weekend are, hence, not counted as producing SDR.

concerned and by threatening the use of force. There are many forms of dispute resolution not carried out by the state: arbitration, mediation, conciliation, and so forth. In order to emphasize the dichotomy between disputes resolved by the state and disputes resolved by other mechanisms, all other mechanisms will be referred to as non-SDR here.

In non-SDR, binding decisions can also be produced by experts who are not lawyers. Conflicting parties sometimes prefer “issue experts” when they believe that the traditions in their trade are important, but complex and hard for non-experts to comprehend.

Table 1 below distinguishes between two kinds of non-SDR, namely arbitration and non-arbitration. We propose to speak of arbitration only when the person to issue a decision is allocated the competence of making a binding decision. Non-arbitration (mediation and similar forms), where a mediator tries to act as a communication facilitator who helps the conflicting parties to see their conflict from a different angle and possibly find a mutually satisfying solution, are, hence, not included in our definition of arbitration.

Table 1: Comparing SDR with Non-SDR

	Non-SDR		SDR
	Non-Arbitration (Mediation, e.g.)	Arbitration	
Decision enforceable in state court?	No	Yes	Yes
Qualification of Third Party	Not necessarily legal expert	Not necessarily legal expert	Judge (Legal expert)
Participation in Dispute Resolution	Voluntary	Voluntary <i>ex ante</i> , mandatory <i>ex post</i>	Mandatory under certain conditions
Procedural rules	Often very informal	Voluntarily agreed upon (hearing of evidence limited)	Highly structured (hearing as well as proceedings themselves)
Possibility to appeal?	No	Usually not	Usually yes
Open to public?	No	Usually not	Yes
Opinion published?	No decision	Usually not	Yes
Precedent?	No	Very limited, if at all	Yes

Further differences between these three kinds of dispute resolution are highlighted in Table 1 too: Participation in non-SDR is typically voluntarily agreed upon by the contracting parties. If their contract foresees non-SDR as a means of resolving possible disputes, however, it is no longer voluntary should one of the conflicting

parties decide to take the case to the agreed-upon arbitrator. One could thus say that arbitration is voluntary *ex ante* (before the contract is concluded) but mandatory *ex post*. Mediation, on the other hand, is typically voluntary both *ex ante* and *ex post*, whereas SDR can be forced upon citizens even against their will (e.g. following suspected criminal behavior).

The procedural rules used to come to some kind of conclusion also differ among the three kinds of dispute resolution: in mediation, they are extremely informal, whereas in SDR they are often highly structured regarding not only the hearing of evidence and witnesses, but also the proceedings themselves. Again, arbitration is in the middle with the conflicting parties being master over the procedures to be used should a conflict over the interpretation of the contract arise. Frequently, the hearing of evidence is highly restricted compared to the way it is done in SDR.

The right to appeal a decision of a state court is often considered a crucial trait of a fair and impartial judiciary. Should one party have the impression that the judiciary has not properly taken into account the facts presented in court, it has the option to appeal the decision and turn to an appeals court. In non-SDR, the possibility to appeal could be contractually stipulated in writing. In practice, however, this is very rarely found, which already leads us to one of the assumed advantages of non-SDR over SDR: namely, that the time needed to reach a final decision can be substantially shorter in non-SDR than in SDR, one important reason being that there usually is no way to appeal a decision.<sup>4</sup>

Similar differences hold with regard to the question whether the proceedings are open to the public: the publicness of court proceedings is often interpreted as an important element for securing the accountability of the judiciary. The argument is that judges are more likely to closely follow the law and treat the conflicting parties (or the suspect) with respect when anybody has a right to follow a trial. Publicness can then be interpreted as a monitoring device (see Voigt 2008b for an analysis of the economic consequences of judicial accountability). Most non-SDR cases are, however, not open to the public. The parties are, of course, free to agree upon making them open to the public, but their actual behavior reveals that they usually do not believe this to be advantageous.

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<sup>4</sup> To be more precise: arbitration decisions can often be appealed against in state courts, yet doing so is acting against firmly established conventions in many countries. Appeals are thus extremely costly to the reputation of the party who appeals a non-SDR decision in a state court; they are therefore rare.

Obliging judges to write an extended reasoning is, again, often interpreted as an important trait of judicial accountability and impartiality. If judges are forced to give explicit reasons for their decision, this will make it more difficult for the executive or legislature to influence the court or for one of the conflicting parties to engage in bribery or intimidation. Also, an extended reasoning often transcends the concrete case at hand, in that it has effects on the development of law in a more general way. Providing an extended reasoning takes time and thus increases costs. The willingness of conflicting parties to pay – at least partially – for the more general development of law cannot be assumed. In fact, the opinions issued by non-SDR courts are often very short. Since mediation does not know any dicta in the traditional sense, the issue of extended reasonings does not apply.

Closely connected to the arguments just discussed is the question of precedence. Precedence is a public good, and many decisions within the frame of SDR exhibit precedent, even in civil-law countries. In non-SDR, precedent plays only a minor role: judges in private courts do not feel obliged to follow the decisions of judges in other private courts. What is more, even if they wanted to, they often would not be able to, because most decisions by non-SDR courts are never published.

After having described the major differences between SDR and non-SDR, it might be apt to turn to some of the possible advantages that are often ascribed to non-SDR – and that follow directly from the differences. It is often argued that being able to choose one's own judges is an advantage. This can be a particular advantage in cases in which it is not legal knowledge that is central to a fair decision, but knowledge of the norms and traditions in a specific sector. For lack of a better term, we have called these judges "issue experts" rather than "legal experts". A second advantage of non-SDR that is often mentioned is that less time is needed before a final decision is reached. In business, time is often of the essence. A third advantage is that conflicts do not get widely publicized; the conflicting parties are not afraid of losing their reputation vis-à-vis third parties or the public at large. Non-publication of the conflict in combination with less adversarial procedures often enables the conflicting parties to cooperate even after a conflict. Interestingly, when asked to evaluate the degree of perceived satisfaction with various forms of dispute resolution, parties often express a higher level of satisfaction with non-SDR courts although they are often more expensive in monetary terms than SDR.



### 3 Some Theory

#### 3.1 A Matter of Choice

Imagine a person interested in exchanging some fairly complex goods with another person in his home country.<sup>5</sup> If they are located in a country with a highly developed institutional system, one would suppose they negotiate a contract that they fix in writing, probably relying on the help of lawyers. Both parties might assume that in case of a conflict, after some bilateral negotiation period, the natural thing is to turn to a state court for conflict resolution.<sup>6</sup> Yet, state courts might be corrupt, subject to direct government influence, very slow, or very costly. Unreliable state courts are equivalent to high transaction costs. Our actors will thus seek alternatives with lower transaction costs. Representatives of the New Institutional Economics have identified quite a few mechanisms that are used to economize on transactions costs: (1) the actors could (unilaterally) invest in their reputation – and make the loss of it very costly; (2) they could (bilaterally) exchange hostages to make the contract self-enforcing; (3) they could decide to set up a common firm (i.e., internalize the transaction); (4) they could decide to search for a more reliable (trilateral) conflict resolution, or (5) they could realize that transaction costs outweigh expected rents of the deal and forego an exchange altogether.

Here, we are interested in their choice between SDR and non-SDR (i.e., the choice between the default mechanism and option 4). But it is important to keep in mind that there are more choices. Option (5) is likely to be most detrimental to the development of an economy, the attractiveness of option (3) depends on corporate law and finance, etc. To simplify the argument, here we will deal only with the choice between SDR and Non-SDR. The simple conjecture to be developed is that if the expected utility connected with non-SDR is higher than the expected utility of SDR, then actors will favor non-SDR over SDR. Their choice will thus hinge

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<sup>5</sup> We hence refrain from analyzing international arbitration, which would imply additional complexity.

<sup>6</sup> Williamson (1985, 20, 32): “Most studies of exchange assume that efficacious rules of law regarding contract disputes are in place and are applied by the courts in an informed, sophisticated, and low-cost way ... the facts, however, disclose otherwise. Most disputes, including many that under current rules could be brought to a court, are resolved by avoidance, self-help and the like ... (And) because the efficacy of court ordering is problematic, contract execution falls heavily on (governance structures).”

upon quality and costs of both SDR and non-SDR.<sup>7</sup> The next subsection lists a number of factors conjectured to determine the (perceived) quality of SDR. For the moment, we assume that both the expected utility of non-SDR and the number of transactions are exogenously fixed. This implies that the lower the quality of SDR, the higher the expected demand for non-SDR. The first hypothesis to be developed hence assumes that SDR and non-SDR are substitutes for each other.<sup>8</sup> Later subsections deal with the preconditions and incentives for supplying non-SDR. There, a competing hypothesis is developed, namely that SDR and non-SDR are complements rather than substitutes.

The complementarity view implies a change in the level of analysis: for a given contract, SDR and non-SDR are always substitutes, because a firm always chooses between them. Complementarity thus refers to the aggregate level: an improved quality of SDR (i.e., a lower implicit price) induces additional demand for non-SDR. This is possible as soon as the total number of contracts conducted in an economy is no longer assumed to be exogenous. In terms of the mechanisms listed above: options (1), (2), (3), and (5) might become relatively less attractive, which correlates with a higher demand for both SDR and non-SDR.<sup>9</sup>

### 3.2 State Dispute Resolution and Non-SDR as Substitutes

Suppose that the quality and costs of non-SDR are exogenously given. Then the choice between SDR and non-SDR is determined by the quality and costs of SDR. It seems reasonable to assume that the following aspects determine the choice between SDR and non-SDR:

- (1) The number of procedural steps that need to be complied with in order to produce a binding decision (“procedural formalism”).<sup>10</sup> If these

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<sup>7</sup> For simplicity, we assume that the parties to a bilateral contract either both prefer SDR or both prefer non-SDR. It could, of course, very well be that one prefers SDR and the other non-SDR. To keep things simple, we will not deal with this possibility.

<sup>8</sup> In microeconomics, substitutes are conventionally described via their price quantity relations (positive cross price elasticity). Here we assume that lower quality implies higher prices. If the quality of SDR falls, its implicit price rises, and we would expect more people to choose non-SDR. Complements can be described in a similar fashion: If the quality of SDR falls, its implicit price rises. This would lead to reduced demand in non-SDR.

<sup>9</sup> McMillan and Woodruff (2000, 2445) suggest speaking of complements if improving SDR (they have the improvement of legislation in mind) increases the value of non-SDR.

<sup>10</sup> Djankov et al. (2003) interpret a high degree of procedural formalism as indicating the attempt of government to remain in charge of the outcomes produced by the judiciary. Hayo and Voigt (2008)

requirements are perceived as redundant and not contributing to the quality of judicial decision-making, but are time-consuming and costly nevertheless, non-SDR might appear relatively more attractive. But if procedural formalism is perceived as important in producing fair and reliable decisions, non-SDR might not be an attractive alternative.

- (2) The perceived expertise of SDR judges; if state judges are perceived as highly qualified and having understanding for the necessities of actors who compete in the market, this will contribute to the quality of SDR. SDR judges are experts in legal procedures but not necessarily in the specific issues being disputed. The more specialized the judges of a country, the higher their expertise can be expected to be. An indirect but straightforward way to take this into account is to use the number of highest courts a country has as a proxy for the degree of specialization among the judges of the country.<sup>11</sup>
- (3) The perceived level of corruption within the judiciary. Corruption among judges means that the higher willingness to pay for a decision might dominate other criteria, such as having complied with a contract. Contracts hence become relatively meaningless in such an environment. If partners are interested in the contents of their contract and corruption within the state judiciary is perceived as high, then non-SDR appears relatively more attractive.
- (4) The perceived degree of judicial independence; lack of corruption in the judiciary refers to independence from the conflicting parties whereas independence refers to the absence of pressure by members of the other government branches. Judicial independence appears particularly relevant in cases in which the government has a stake. If the judiciary's independence from the other branches of government is perceived as low, then non-SDR is relatively more attractive.

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argue that a high degree of procedural formalism can also be interpreted as an attempt to make the judges play by the rules, which would, in turn, increase legal certainty.

<sup>11</sup> An alternative tack on this issue could be to have a look at the career pattern of SDR judges: if they are made judges very early in life, the chances that they have gathered some of their own experience with having to compete on the market (e.g. as lawyers) appear to be lower than if they are appointed later in life.

Yet another alternative could be to take explicit account of the number of "issue experts" represented at special chambers of state courts. In Germany, e.g., so-called *Wirtschaftskammern* ("economic chambers") are primarily staffed with issue experts.

- (5) The perceived degree of judicial accountability; judges are supposed to implement legislation. If the judicial system of a country is able to create mechanisms that make judges implement the law, then judicial decision-making is expected to be predictable. Being able to form expectations that have a high chance of turning out to be correct is important in business. A high degree of accountability is thus presumed to make SDR more attractive.<sup>12</sup>
- (6) The monetary costs of using SDR; the lower the monetary costs of SDR, the more attractive is SDR, *ceteris paribus*.
- (7) The time costs of using SDR; time is frequently of the essence in business, so arriving at final decisions fast can be a big asset in favor of SDR.<sup>13</sup>

Some of these factors reinforce each other: if judicial corruption is low, then one would, e.g., expect accountability or predictability to be rather high. Other factors need to be traded off against each other: a high degree of procedural formalism or accountability is likely to be costly in terms of both money and time. A number of implications follow from these observations: the expected utility from the use of SDR also depends on the kind of exchange the interacting partners want to carry out. If it is highly complex and expensive, the expertise of the judges might be key. If, on the other hand, it is the exchange of a commodity, speed and monetary costs might be weighted more heavily. This means that it appears desirable to control for (i) the sector of the parties, (ii) the size of the contract in monetary terms, but possibly also for (iii) the size of the interacting firms. It further means that it is desirable to keep the determinants of SDR quality apart and not to lump them into one overall indicator.<sup>14</sup>

We argue that the perceived quality of SDR is determined by these variables. Formulated as hypothesis #1a: *The lower the perceived quality of SDR, the more frequently will non-SDR be used, ceteris paribus.*

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<sup>12</sup> Yet, a case getting to court is sufficient evidence for incompatible expectations of the conflicting parties.

<sup>13</sup> As soon as a case is with a court, the party expecting to lose might have incentives to slow down the process. Whether and to what degree this is possible depends *inter alia* on procedural law.

<sup>14</sup> Lumping might, however, be necessary out of more pragmatic econometric reasons: given that the number of observations is limited, an overall indicator helps save degrees of freedom. Moreover, to the degree that variables reinforce each other, using an overall indicator might dispense with the problem of multicollinearity.

This formulation assumes a given quality of non-SDR. Yet, the frequency with which non-SDR is used will also depend on its perceived quality. *Prima facie*, the perceived quality of non-SDR is expected to be determined by exactly the same factors. Formulated as hypothesis #1b: Under an exogenously given quality of SDR, *the number of transactions structured under non-SDR will be higher, the higher the perceived quality of non-SDR.*

Djankov et al. (2003) interpret a high degree of procedural formalism as equivalent to a high degree of interventionism of the sovereign into judicial decision-making. A high degree of formalism should, hence, make SDR less attractive. They further claim that civil-law countries systematically have a higher degree of formalism than common-law countries. In combination, these two statements can be formulated as hypothesis #2: *C.p., use of non-SDR will be more frequent in civil-law than in common-law countries.*

Until now, it has been assumed that SDR and non-SDR are substitutes. This makes perfect sense as long as the total number of contracts is supposed to be exogenously fixed. As soon as one takes into account that this might not be a reasonable assumption due to the reasons outlined in 3.1, then this opens up the possibility that SDR and non-SDR might be complements. Analyzing SDR and non-SDR as complements presupposes an analysis on the macro-level, because firms will always choose either one or the other of the mechanisms, not both. SDR and non-SDR might also be complements because the (potential) quality of non-SDR is at least partially determined by the same actors that are responsible for the quality of SDR. The possibility of complementarity is discussed in more detail in the next sub-section.

### **3.3 State Dispute Resolution and Non-SDR as Complements**

Complementarity can refer to both quantity and quality: better SDR could be correlated with both better and more frequent non-SDR use. The shadow of SDR influences non-SDR. Decisions of one dispute resolution system determine, or influence, the expectations concerning likely outcomes of the other. “Good” or “adequate” decisions in SDR hence improve the expected quality of non-SDR decisions. Since the decisions of state courts are public goods, they determine the expectations of many actors. Even if actors agree on non-SDR, the expected outcome of a state court still acts as a “default outcome”. The “better” or “more adequate” it is, the “better” or “more adequate” the expected outcome under non-

SDR needs to be, otherwise the conflicting parties would not be able to agree on non-SDR.<sup>15</sup>

Suppose that many potential contractors perceive the degree of procedural formalism implemented in SDR as too high. It is straightforward to assume that in such a situation, entrepreneurs will try to satisfy the demand for less formal conflict resolution. Yet, conflicting parties might still be interested in getting an enforceable award. Decisions by arbitration organizations are frequently enforceable via state courts. This is not the case with regard to other forms of non-SDR, hence our emphasis on this more fine-grained delineation.<sup>16</sup> Before non-state courts can issue decisions that are enforceable even in state courts, the state needs to create the respective preconditions. Hence, this is where the complementarity between SDR and (one kind of) non-SDR comes in.

The procedural law needs to allow for the possibility to have non-state courts decide upon conflicts. Most likely, the procedural law will contain a number of minimum requirements that need to be met before enforceable awards can be issued. They can refer to necessary procedures, the qualifications of arbitrators, and so forth. If arbitral awards are not automatically enforceable, the resources needed in order to make them enforceable need to be taken into account (these include costs in terms of time and money but also the probability of finally getting the award).<sup>17</sup>

States can signal their general attitude toward non-SDR by ratifying a number of international conventions or passing domestic arbitration legislation. These are the

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<sup>15</sup> Galanter (1981) argues that non-SDR forums are able to influence the shape of the shadow emitted by state courts: it is non-state forums that amplify, extinguish, or modify messages of state courts. However, the less formal non-SDR becomes, the lower the influence of SDR on it can be assumed to be. The shadow of the law hence vanishes with higher degrees of informality. With no state enforcement at hand, the non-SDR outcomes will rather be influenced by the value of future transactions. One could thus quip that, with higher degrees of informality, the shadow of the future takes over from the shadow of the law.

<sup>16</sup> The possibility that weak states might not even secure the enforcement of SDR decisions only reinforces the complementarity consideration.

<sup>17</sup> There is a long discussion whether ADR can work even in the absence of the explicit backing by the state judicial system. Landes and Posner (1979, 247f.) argue that non-SDR depends on the enforceability of awards with state courts, whereas Benson (1988, 656f.) argues that non-SDR functioned in the US even before 1920, when a law of the State of New York made arbitration awards enforceable in front of state courts. Benson emphasizes that, historically, the threat of terminating business relationships has been sufficient to ensure compliance with arbitral awards.

U.N. Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the New York Convention) that makes awards issued by foreign non-SDR courts enforceable in their countries. Further, the Convention on the International Centre for the Settlement of Investment Disputes (ICSID) gives private investors who believe that a member state has not complied with its contractual obligations the possibility of a trial against that state. Members thus explicitly choose to have their behavior monitored by third parties. Contracting states to ICSID are required by the Convention to enforce ICSID arbitral awards as *res judicata* in their own territory. Finally, the United Nations Commission on International Trade Law (UNCITRAL) agreed on a Model Law on International Commercial Arbitration in 1985. As of November 2007, more than 51 states had passed legislation based on the Model Law.<sup>18</sup> Given that the contracting parties are already familiar with the Model Law, transaction costs of relying on non-SDR within these states should be lower than in states that do not have explicit legislation dealing with arbitration or countries that have arbitration legislation that is not based on the Model Law of UNCITRAL.

Formulated as hypothesis #3: *The more of these conventions states have ratified, the more frequently should non-SDR be used in their countries, c.p.*

In the last subsection, the hypothesis that the use of non-SDR should be more frequent in civil-law countries was advanced. In light of the considerations developed here, this hypothesis needs to be reformulated. Assuming that civil-law countries have chosen a high degree of procedural formalism not only in SDR but also in non-SDR, the modified hypothesis #2(mod) is: *C.p., there will be no significant difference in the use of non-SDR between civil-law and common-law countries.*

*Prima facie*, it seems reasonable to assume that the perceived quality of non-SDR should be a function of exactly the same variables that were conjectured to explain the perceived quality of SDR.

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<sup>18</sup> To be exact: 51 states plus the Hong Kong and the Macau regions of China, Scotland and Bermuda as part of the U.K., and 6 U.S. states ([http://www.uncitral.org/uncitral/en/uncitral\\_texts/arbitration/1985Model\\_arbitration\\_status.html](http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/1985Model_arbitration_status.html)).

On logical grounds, no systematic correlation between the quality of SDR and non-SDR appears necessary.<sup>19</sup> It thus seems straightforward to assume that all four cells of Table 2 are empirically possible. The numbers in the cells indicate the expected overall number of contractual transactions in an economy ranked from most (1) to least (4). If both SDR and non-SDR are of high quality, we expect the largest number of contracts; if both are of low quality, we expect the lowest number of contracts. The rank order of high/low and low/high is open to discussion. We have here implicitly assumed that even a high-quality non-SDR always remains an imperfect substitute for low-quality SDR or – to express the same conjecture in different terminology – that state failure is more detrimental to decentralized exchange and economic development than market failure.

Table 2: The number of expected transactions as a function of the quality of both SDR and non-SDR

		Quality SDR	
		High	Low
Quality Non-SDR	High	(1)	(3)
	Low	(2)	(4)

A low given quality of SDR can have a number of (different) consequences that need not necessarily result in a higher number of transactions structured under non-SDR. In empirically ascertaining the relationship between SDR and non-SDR, it is desirable to control for them as completely as possible. A low-quality SDR means that transaction costs are high. A response other than using non-SDR could consist in reducing market-mediated transactions by increasing firm size, i.e., by keeping the transactions within one organization in which third-party dispute resolution is superfluous.

On the other hand, it can be argued that under certain conditions, the frequency with which non-SDR is used can be very high *although* the quality of SDR is generally perceived as high. It can, of course, be argued that the constraints under

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<sup>19</sup> It can, of course, be argued that a low-quality SDR would make investments in non-SDR appear more profitable. If investment is positively correlated with quality, then

$$\partial Q_{\text{Non-SDR}} / \partial Q_{\text{SDR}} < 0 \quad (1)$$

should hold. Yet, the higher the quality of SDR, the higher the quality of non-SDR needs to be in order to be competitive, which would mean that

$$\partial Q_{\text{Non-SDR}} / \partial Q_{\text{SDR}} > 0 \quad (2).$$



which players act are not sufficiently specified if this is the case. Our argument here is that they are of a kind very different from the variables discussed above, which is why we propose to discuss them in isolation here. If the “*Streitkultur*” of a country is such that openly confronting views are not supposed to be expressed and that heavy emphasis is laid on “harmony” and “consensual solutions”, we expect heavier use of mediation. It could be, however, that drawing on non-SDR is interpreted as being less conflictual than SDR, in which case non-SDR would be more heavily used than in societies with a more open or aggressive “*Streitkultur*”. But it will be very difficult to quantify the degrees of “*Streitkultur*” realized in various countries (crude proxies could be religious affiliations as well as individual values revealed in surveys). Actually, it is important not to confuse the degree of *Streitkultur* with a related, but clearly distinct aspect, namely the time horizon of the players: if players discount the future only very little, they have an interest in a compromise, because that will enable them to cooperate with the conflicting party in the future.

### **3.4 Strategic Interaction Between SDR and Non-SDR?**

Until now, the possible relationships between SDR and non-SDR have been dealt with rather statically. Yet, it could also be the case that SDR and non-SDR compete for business and that strategic interactions take place between these two kinds of dispute resolution. The easiest way to deal with these interactions is to assume that SDR and non-SDR are unitary actors, which would make the game to be analyzed a two-person game. They would thus be the sole suppliers of dispute resolution and duopoly games would seem an adequate starting point to analyze the supply of dispute resolution. But drawing on duopoly games seems premature for a number of reasons: (i) The two players do not compete on the same level: the state can set the rules of the games – and thus acts as both player and master over the rules. (ii) It seems to be almost the norm that the costs of SDR are not fully borne by the conflicting parties, but subsidized by the taxpayer. (iii) It can further be argued that the products are different: whereas non-SDR produces primarily decisions, SDR produces decisions AND precedents. Simple duopoly games will thus not help in analyzing possible interactions between SDR and non-SDR.

Further, many writers seem to assume that a legally established and recognized non-SDR would introduce some kind of competition with SDR – and hence lead to improvements in both non-SDR and especially SDR (see Nugent 2000 for an example of such thinking). To make such a claim, one would have to be able to identify a transmission mechanism that is based on individual incentives. Judges are the actors who are most directly responsible for the quality of the output of the

judicial system. They are usually paid independently from the number of cases that they decide upon. If the total number of cases that end up in SDR decreases due to the competition from non-SDR, this will thus not decrease their income and thus does not constitute an incentive to change their behavior. Given that the number of judges remains constant, fewer cases might even *improve* their utility, because there is less work!<sup>20</sup>

The actors who are more indirectly responsible for the quality of SDR are, of course, government members. Here, the incentives following a decline in the caseload of SDR are not clear-cut either: declining caseloads in SDR could be welcomed on the one hand. On the other, a rise in the number of cases decided under non-SDR can also be interpreted as an indicator for decreasing influence of the state on justice. But it is entirely unclear that government would try to turn around this trend by improving the quality of SDR; it might just as well try to reduce the importance of non-SDR by making non-SDR decisions not immediately enforceable via the state machinery, etc. All in all, the notion of competition between SDR and non-SDR does not seem to be very convincing.

Although the notion of competition between SDR and non-SDR is deemed unconvincing, the choice of non-SDR by contracting partners does reveal valuable information about the desired traits of conflict resolution. Formulated as *hypothesis 4: The factually chosen dispute-resolution arrangements reveal information about their most preferred traits*. The higher the number of dispute resolution venues, the more valuable the revealed information. Landes and Posner (1979) point out that non-SDR almost never relies on jurors. The authors interpret this as sufficient evidence that businesspeople prefer specialists to laypersons as judges. The preferences of conflicting parties are also revealed with regard to appeals possibilities, cost allocation between the parties, adversarial vs. inquisitional fact finding, and so forth. These insights can be relevant for reforming SDR.

#### **4 Estimation Approach and Data Description**

In the preceding section, two competing views on the demand for non-SDR were presented: one – the substitutes view – argues that low-quality SDR induces higher demand in non-SDR, whereas the other – the complements view – argues

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<sup>20</sup> Hirschman's (1970) treatise "Exit, Voice and Loyalty" starts with the observation of a state railway whose employees are happy about competition because this exit possibility reduces the demands of unsatisfied clients to improve its service (i.e., voice).

that low-quality SDR is connected with lower demand for non-SDR. To test these competing views empirically, a measure for the use of non-SDR is needed as a dependent variable. On the right hand side, a measure for the quality of SDR (i.e., its implicit price) is necessary. Other potentially relevant covariants would be part of the Z-Matrix and the equation to be estimated would look like this:

$$\text{Quantity}_{\text{Non-SDR}} = \alpha + \beta \text{Quality}_{\text{SDR}} + \gamma Z + u \quad (1)$$

Adherents of the substitutes view would expect  $\beta$  to be negative, whereas adherents of the complements view would expect it to be positive. Unfortunately, we will not be able to estimate this equation, because we are not aware of any measure for the quantity of non-SDR across countries. Ascertaining this number is close to impossible: Often, dispute resolution does not take place within formal organizations, but are settled by village elders or clergy and no statistics are kept at all. But even numbers from formal arbitration organizations are extremely difficult to get. In many countries, it is not only one organization that offers non-SDR services, but a number of them; getting a complete picture is thus difficult. Most of the organizations offering non-SDR do not publish statistics; some might not even keep any. Definitions of what exactly constitutes “arbitration” greatly vary between countries, further increasing the difficulty of comparing.

Because reliable objective data are unavailable, subjective data are used here instead. The Investment Climate Surveys of the World Bank have been carried out in some 50 countries and are based on the answers of more than 30,000 entrepreneurs. One variable contains information on the percentage of payment disputes that companies resolve by court action. The exact wording of the question is: “Over the last 2 years, what percent of your establishment's disputes over payments were resolved by court action?” For a number of reasons, this can only be a crude approximation of the left-hand-side term. In particular, we do not know what particular means those who did not resolve their payment disputes via courts used. Additionally, we only have the percentage and not the absolute numbers, implying that a direct test of the two competing views is impossible.

$$\frac{\text{Quant}_{\text{SDR}_i}}{\text{Quant}_{\text{SDR}_i} + \text{Quant}_{\text{Non-SDR}_i}} = \alpha + \beta \text{Qual}_{\text{SDR}_i} + \gamma \text{Qual}_{\text{Non-SDR}_i} + \delta Z_i + \varepsilon_i \quad (2)$$

An alternative left-hand-side variable is also taken from the Investment Climate Survey of the Bank. After being asked whether they are member of a business association, entrepreneurs were asked for the most important services provided by

the business association. One option was “dispute resolution”; possible answers were “no value”, “minor value”, “moderate value”, “major value”, and “critical value”. We assume that attributing a high value to this service implies that respondents are not entirely satisfied with SDR.

We now move to the data we use for the right-hand-side variables and begin with possible proxies for the quality of SDR. In choosing an adequate indicator, two choices need to be made: we need to choose between subjective and objective indicators and we need to choose between overall indicators of quality offered by SDR – or more fine-grained ones that decompose the various aspects that determine the quality of justice. We begin with an overall indicator that was also generated as part of the Investment Climate Surveys of the World Bank. More than 30,000 entrepreneurs were asked what level of confidence they had in their judiciary system. More precisely, the number used here reflects the percentage of firms that agree with the statement “I am confident that the judicial system will enforce my contractual and property rights in business disputes.”<sup>21</sup>

Let us move on to more fine-grained indicators that reveal information on the quality of specific aspects of SDR. If we are interested in policy implications, more detailed indicators might have the advantage of pointing us toward specific aspects that – if improved – could have substantial effects. The more specific variables reflect the degree to which courts are perceived as (1) “fair & impartial”, (2) “honest”, (3) “quick”, (4) “affordable”, (5) “consistent” and (6) being able to enforce their decisions.

Unfortunately, we are not aware of any indicators proxying for the quality of non-SDR. This implies that no coefficient for the “Qual<sub>Non-SDR</sub>” variable can be estimated. Devising such an indicator is definitely a desideratum.

This is why we move on to the presentation of our control variables. The choice between SDR and non-SDR could also be influenced by (1) state support for non-SDR, (2) the factual supply of formal non-SDR, and (3) the knowledge that

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<sup>21</sup> We have to assume that respondents do not consider non-SDR part of “the judicial system”. The survey that the World Economic Forum carries out annually contains a related variable that has, however, a different emphasis. The variable “Efficiency of the legal framework” asks for consent to the statement “The legal framework in your country for private businesses to settle disputes and challenge the legality of government actions and/or regulations.” Whereas the World Bank variable is interested in private law disputes, the focus of this variable is on disputes regarding public law. Assuming that the state as an actor in domestic affairs is not ready to opt out of SDR, low levels of consent to this statement should not lead to higher use of non-SDR.

dispute resolution other than SDR exists. We propose to control for state support by a synthetic variable composed of three dummy variables, namely (i) ratification of the New York Convention, (ii) having passed UNCITRAL model law domestically, and (iii) membership in ICSID. Each aspect can earn a country one point, such that the composite indicator can take on values between 0 and 3. We call the variable “Arbitration possible”.<sup>22</sup>

It cannot be excluded that autocrats prefer to keep as many things as possible under their control, including conflict resolution. We hence also control for a country’s democracy ranking, drawing on the Polity IV indicator that ranks countries between -10 (perfect autocracy) and 10 (perfect democracy).

The factual supply of non-SDR is almost as difficult to ascertain as its factual use. We use an indicator that simply measures the number of non-governmental organizations active in a country. This can be interpreted as a kind of “civil society indicator”. Some non-governmental organizations resolve disputes. If many such organizations exist in a country, the likelihood of finding non-SDR is thus higher.

Finally, firms – and others – can demand non-SDR only if they are aware of this tool to resolve disputes. Differences in the available information about the supply of non-SDR thus need to be controlled for. We do this by controlling (i) for the age of the current regime – assuming that the longer it has already existed, the higher the number of actors that have learned about non-SDR; (ii) a dummy for Central and Eastern Europe; based on the assumption that the state used to be omnipresent in this region until two decades ago, non-SDR is expected to be used less than in other regions; (iii) the degree of an economy’s openness. If firms have many international contacts, they will have faced the option of opting out of their national law. This might induce a learning effect that this could also be possible for domestic transactions.

In addition, we control for per capita income. The relationship between income and SDR use also reveals some information on the issue of the complementarity or substitutiveness of SDR and non-SDR: Given that high-income countries generally enjoy high-quality SDR, the frequent use of non-SDR in these countries

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<sup>22</sup> Potential users need not necessarily perceive a state’s promise to make non-SDR possible by ratifying these conventions as a credible commitment. Such complications will, however, not be dealt with here.

would point toward complementarity. Legal origins are taken into account in order to be able to test hypotheses 2 and 2mod empirically.

Finally, we also control for the degree of an economy's informality. Informal firms are not registered and therefore refrain from drawing on the formal institutions supplied in their country. Informality can have many reasons such as the difficulty of becoming formal, a high degree of regulation, high tax rates, and so forth. But the informality option also has costs, namely not realizing potential economies of scale, not being able to rely on "official" financing, and so on. Informality is interesting for us, because the deficient quality of SDR should NOT be a reason to remain informal, because entrepreneurs can decide to play by the substantive legislation of their country and to opt in favor of non-SDR in case of a conflict. Connecting the degree of informality observed in an economy with the reliance on SDR thus allows us to disentangle the reasons for non-SDR: if both the substance of the rules and their enforcement are perceived as weak, then we would expect firms to remain informal altogether. If only the enforcement is weak – but the substantive rules are adequate – then we should expect to see a low level of informality coupled with a high level of non-SDR. Table 3 contains the descriptive statistics on the relevant variables used here. Their exact definitions as well as their sources can be found in the appendix.

## **5 Estimation Results and Possible Interpretations**

To save space, we include only three tables with results. All three tables use the percentage of disputes (over payment) that were resolved by drawing on court action as the dependent variable. Table 4 contains the basic regressions, Table 5 uses more fine-grained indicators for various aspects of (perceived) court quality, and Table 6 draws on some of the variables discussed in 3.2 as (potentially) determining the perceived quality of SDR.

Column 1 of Table 4a presents a baseline model with four explanatory variables. Somewhat unexpectedly, variation in state court use cannot be explained by differences in per capita income. One could have assumed that states with higher per capita income would be able to spend more on their courts and that use of state courts should increase in per capita income. This finding can be interpreted as (indirect) evidence in favor of the complementarity view. A possible counterargument could read that there is no linear relationship between income and the use of state courts. Re-estimating the first model but using the square of per capita income does not make the new term significant, however (not reported in table). Unexpectedly, firms in common-law countries rely less often on state

courts than firms in civil-law countries.<sup>23</sup> The variable, however, does not always reach conventional significance levels. As hypothesized, firms in transition countries are more likely to use state courts than firms in other countries. *Ceteris paribus*, a firm in a transition country is around 10 percentage points more likely to resort to SDR. Finally, countries that have passed legislation favorable to non-SDR are more likely to show more reliance on SDR. This can also be interpreted as corroboration of the complementarity hypothesis.

The only change in column 2 is that we have added the confidence in court variable. It is highly significant statistically and always remains significant at least at the ten percent level in all other columns. Substantially, a one-standard-deviation increase in the confidence variable leads to an increase of almost four percent in the use of state courts. That confidence in the courts is an important determinant of state court use can also be seen in the change in the adjusted R-square between columns 1 and 2: inclusion of the confidence variable adds ten additional points here.

The number of observations is severely limited, so we need to be somewhat stingy with the number of controls included at any time. Turning to columns (3) to (7), we see (3) that firms in more democratic countries are more likely to resort to SDR, (4) that the number of years a country has been democratic is not a significant determinant for the choice between SDR and non-SDR, and (5) that the same is true for the degree of informality observed in a country, which can be interpreted as at least indirect support for complementarity, (6) but that the number of non-governmental organizations is positively correlated with SDR. A one-standard-deviation increase in the number of NGOs would be connected with a 5.25% increase in the use of state courts. This is more support for the complementarity hypothesis, because a high number of NGOs can be interpreted as being conducive to high-quality SDR because some NGOs are likely to monitor the performance of state courts; but a high number of NGOs is also likely to be correlated with the supply of non-SDR. Column 7 includes all variables in one model; “confidence” is still significant on the ten percent level, but the degrees of freedom in this model are very low.

In Table 4b, the exact same models are estimated except for the dependent variable, which is now the importance of dispute resolution as an argument for

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<sup>23</sup> La Porta et al. (2008) have recently interpreted legal origins as reflecting different styles in the social control of economic life. If “the common law” reflects a general desire for little state intervention, then not subjecting one’s disputes to SDR might even be compatible with La Porta et al.!

membership in a business association. The most relevant result in our context is that the confidence variable remains significant in all specifications. It has a negative sign, indicating that the higher the confidence in (state) courts, the lower the value attributed to (private) dispute resolution services. As before, the dummy variable for transition countries is highly significant but all other variables are not.<sup>24</sup>

Table 5 works with the same benchmark as the models in table 4 but instead of “confidence” as a very broad overall indicator for the quality of SDR, single components supposedly determining the quality of SDR are now included. Plugging in single components allows us to make inferences about the details that conflicting firms care about in SDR. It is interesting that of the six components here taken into consideration, only three turn out to be significant for the choice between SDR and Non-SDR. The components that do not seem to influence this choice are the perception of one’s country’s court system as (i) quick, (ii) affordable and (iii) getting its decisions enforced.<sup>25</sup> On the other hand, components that do seem to influence the decision are the perception of the court system as (i) fair and impartial, (ii) honest/uncorrupt, and (iii) consistent. The components that are statistically significant do have an important substantial influence on the choice between SDR and non-SDR: Every one-point improvement on a scale from 1 to 6 correlates with an increased likelihood of drawing on SDR of around 8 percentage points.

These results are potentially extremely important for policy recommendations: the preferences of the more than 30,000 business people that are the basis of these results seem to indicate that, even if state courts decide in a timely manner and decisions are affordable and enforceable, this does not make them turn to SDR. If the state, for whatever reason, is interested in having disputes resolved by state courts, it should invest in ensuring consistency of court decisions and the fairness as well as the honesty of state courts. Unfortunately, ensuring timely and affordable decisions seems to be less difficult than ensuring the three decisive traits.

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<sup>24</sup> Notice that this country sample is not entirely identical to the first one. Both lists of countries can be found in the first appendix.

<sup>25</sup> One way to make this result appear plausible is to assume that a high degree of enforceability is also a precondition for non-SDR to work well (which is definitely the case with regard to arbitration). If state courts are strong in enforceability, the enforceability of arbitration awards is also likely to be strong. If this is true, strong enforceability of state court decisions would, hence, be no reason to turn away from non-SDR.



Column 7 was generated by starting with all six components and eliminating the least significant component, one after another. The resulting model reinforces some of the observations based on the single components. Timeliness and enforceability now turn up as significant but have the “wrong” sign. The coefficient for the consistency of court decisions almost doubles in size. On a scale from one to six, every one-step improvement in the consistency of court decisions means almost 20 percentage points more disputes resolved in state courts.

The starting point of this study was the conjecture that a low degree of factual independence of state courts could make firms turn to non-SDR. Accordingly, table 6 draws on *de facto* judicial independence as an explanatory variable. This indicator is an objective measure and draws on up to 8 variables. Higher values imply more factual independence (for the construction of this indicator, see Feld and Voigt 2003). It is usually highly significant. The number of observations is quite low, so a robustness check was carried out by using the measure for judicial independence contained in the Bertelsmann Transformation Index (2006). This increases the number of observations by around one half. Results are fairly similar and not reported here in order to save space.

## **6 Conclusions and Outlook**

Starting from the observation that the quality of dispute resolution supplied by many states is mediocre or outright bad, the conjecture was developed that a low quality of SDR could induce a more frequent use of non-SDR. Three hypotheses were developed and then tested. It turned out that the lower the perceived quality of SDR, the less frequently conflicting firms resort to SDR. Turning away from SDR occurs particularly often when the courts are not perceived as fair and impartial, honest or uncorrupt, and consistent in their decisions. Second, it was conjectured that firms in civil-law countries might turn away from SDR more frequently than firms in common-law countries because previous research (Djankov et al. 2003) showed that legal procedures in civil-law countries are more formalistic. Our estimates refute this conjecture. If anything, the exact opposite is the case: firms in common-law countries turn away from SDR more often than firms in other countries. Third, it was hypothesized that the state could lay the foundations for non-SDR and the more thorough those foundations are, the more frequently would firms choose non-SDR as their preferred way of resolving disputes. The results show, however, that in states that have created the preconditions for non-SDR, businesspeople resort significantly more often to SDR. We interpret this as evidence in favor of the complementarity hypothesis.

The fourth hypothesis, that the traits of non-SDR mechanisms factually chosen reveal us information about traits desired by businesspeople, could not be tested here, because we only have information on the traits that make businesspeople choose SDR instead of non-SDR. This implies that coming up with policy recommendations would be very speculative. Before this can be done, more fine-grained data are definitely needed. These include data on the frequency with which non-SDR is used. It is desirable to have detailed information on the specific non-SDR mechanism used, possibly even as a function of the sectors the contracting firms come from, the size of the contract, the size of the firm, and so forth. It is further desirable to have more specific information on the perceived quality of non-SDR mechanisms similar to the information on the quality of SDR. This would make explicit comparisons between SDR and non-SDR possible.

Drawing policy conclusions also presupposes more information on the effects of an intensive use of non-SDR on (1) the number of contracts concluded (direct effect) and on (2) changes in SDR (indirect effect). Sometimes, creating the preconditions for non-SDR has been interpreted as a sort of “quick fix” for a low-quality SDR because such reforms would have a quick effect without implying huge government expenditure. Yet, a report by the Center for Democracy and Governance (1998, 6) observes: “ADR systems tend to achieve efficient settlements at the expense of consistent and uniform practice”, which implies a trade-off between the private good and the public good aspect of adjudication that we began this paper with. A functioning “shadow of the law” presupposes consistent decision-making at state courts. This can increase the number of contracts and, hence, the degree of the division of labor realized, without an increase in conflicts taken either to SDR or non-SDR, because actors can form expectations on likely court decisions – and can thus refrain from factually going to court.

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## Appendix 1: Countries Included

Country	% of Payment Dispute resolved by court action	Membership in Business Ass. Important due to resolution of disputes		
			Kazakhstan	X X
			Kenya	X
			Kyrgyz Republic	X X
			Latvia	X X
			Lithuania	X X
			Moldova	X X
			Nicaragua	X X
			Pakistan	X
			Peru	X X
			Philippines	X X
			Poland	X X
			Romania	X X
			Russia	X X
			Slovakia	X X
			Slovenia	X X
			Sri Lanka	X X
			Syrian Arab republic	X
			Tajikistan	X X
			Tanzania	X X
			Turkey	X X
			Uganda	X X
			Ukraine	X X
			Uzbekistan	X x
			Zambia	x
Albania	X	X		
Algeria	X	X		
Armenia	X	X		
Azerbaijan	X	X		
Bangladesh	X	X		
Belarus	X			
Brazil	X	X		
Bulgaria	X	X		
Cambodia	X			
China	X			
Croatia	X	X		
Czech Republic	X	X		
Ecuador	X	X		
Estonia	X	X		
Ethiopia		X		
Georgia	X	X		
Guatemala	X	X		
Honduras	X	X		
Hungary	X	X		
India	X	X		

Slovenia has the highest per capita income in both samples (15,755 \$US in 2000). The poorest country of the first sample is Uganda (940 \$US in 2000) and Tanzania in the second (\$481 US).

Table 3: Descriptive Statistics of the most relevant variables used

	Observations	Std. Dev.	Minimum	Maximum	Median	Mean
_COURT	39	10.914	0.2900	37.670	11.920	12.657
DISPUTE RES	40	40.698	0.0000	153.09	43.700	54.563
CONFIDENCE	67	15.487	17.020	89.680	60.390	58.954
QCRT	78	0.6189	1.7906	4.8901	3.6607	3.5439
FI_CRT	78	0.7540	1.5757	4.7528	3.5334	3.5276
HU_CRT	78	0.8426	1.4400	5.1000	3.7474	3.6173
Q_CRT	78	0.6318	1.8469	5.5252	4.7678	4.6449
AFF_CRT	78	0.5562	2.3600	4.9481	3.8059	3.7930
CST_CRT	77	0.6762	1.8282	5.0333	3.9680	3.8629
ENF_CRT	78	0.652373	1.673469	4.750000	3.548196	3.520641
CF_CRT	78	0.583208	1.530000	4.408696	3.224775	3.193943
CF3_CRT	78	0.620678	1.727273	4.552381	3.416867	3.385242
EVICTOT	82	201.2007	29.00000	1080.000	225.0000	271.8171
EVICTION	94	0.908658	1.250000	5.916667	3.694445	3.770749
CHECK	94	1.047044	1.416667	6.008772	3.638158	3.664024
PAYJUDY	94	1.239086	2.770270	6.920000	4.654762	4.726126
LAWPY	53	1.893062	0.000000	5.943396	2.666670	3.586564
CRTPY	49	1.720535	0.000000	5.876190	4.166670	3.657529
DE_FACT O_JI	81	0.245202	0.080000	1.000000	0.528571	0.547328
BTIJI	102	2.187751	1.000000	10.00000	5.000000	5.470588
JA	134	0.391250	0.000000	1.000000	0.666667	0.581841

The exact definitions of the variables as well as their sources are documented in Appendix 1.

Table 4a: Use of State Courts Regressed on Confidence in Courts

<b>Dependent Variable: Percentage of All Disputes Resolved in State Courts</b>							
	1	2	3	4	5	6	7
<i>Independent Variables</i>							
<i>CONFIDENCE</i>		0.232** (3.08)	0.320** (2.85)	0.259* (2.60)	0.290** (3.32)	0.232** (2.81)	0.372(*) (1.97)
<i>ARBITRATION POSSIBLE</i>	3.639(*) (1.86)	3.864* (2.20)	3.818* (2.16)	4.303* (2.20)	3.573* (2.07)	3.782* (2.21)	4.63(*) (1.95)
<i>GDP</i>	0.000 (0.74)	2.91E05 (0.07)	0.000 (0.84)	0.000 (0.25)	0.000 (0.26)	0.000 (1.41)	0.000 (1.65)
<i>COMMON LAW</i>	-6.657(*) (1.86)	-7.754(*) (1.84)	-8.265 (1.66)	-6.742 (1.35)	-11.085* (2.35)	-7.874(*) (1.76)	-6.99 (0.78)
<i>TRANSIDUM</i>	9.238* (2.18)	10.752** (2.79)	12.94** (3.47)	8.88 (1.58)	9.273* (2.09)	13.817** (3.59)	11.51(*) (2.04)
<i>Polity IV</i>			0.493(*) (1.81)				0.477 (1.13)
<i>Age Democracy</i>				0.134 (1.25)			0.266 (1.70)
<i>Informality</i>					0.119 (0.90)		0.08 (0.52)
<i>Number of INGOs</i>						0.006** (2.87)	0.005* (2.50)
Constant	-1.979	-14.13	-19.65	-282.49	-25.05	-18.00	-562.32
Adjusted R <sup>2</sup>	0.270	0.373	0.411	0.367	0.371	0.441	0.441
SER	9.238	8.561	8.294	9.032	8.548	8.081	8.464
Jarque-Bera Value	5.77(*)	6.17*	2.974	3.265	6.83*	5.394(*)	2.674
Observations	38	37	37	31	36	37	30
<p>*, **, and *** show that the estimated parameter is significantly different from zero on the 10, 5, and 1 percent levels. The numbers in parentheses are the absolute values of the estimated t-statistics based on White heteroscedasticity-consistent standard errors. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera test on normality of the residuals. All regressions include age, checks, and polity iv as standard explanatory variables. "LP" indicates the lay participation variable that is interacted.</p>							

Table 4b: Dispute Resolution as Service of Business Associations Regressed on Confidence in Courts

<b>Dependent Variable: Importance of Dispute Resolution as Service Offered by Business Associations</b>							
	1	2	3	4	5	6	7
<i>Independent Variables</i>							
<i>CONFIDENCE</i>		-0.779* (2.20)	-0.785* (2.24)	-0.693(*) (1.83)	-1.240** (3.79)	-0.79* (2.15)	-1.119** (3.39)
<i>ARBITRATION POSSIBLE</i>	-4.808 (0.72)	-4.978 (0.70)	-4.974 (0.689)	-8.307 (0.93)	-5.105 (0.75)	-4.270 (0.554)	-7.077 (0.69)
<i>GDP</i>	0.001 (0.74)	0.002 (1.16)	0.002 (0.99)	0.002 (1.01)	0.002 (1.54)	0.003(*) (1.75)	0.003 (1.75)
<i>COMMON LAW</i>	-1.111 (0.06)	0.611 (0.03)	0.548 (0.03)	-3.766 (0.19)	18.558 (1.25)	0.773 (0.04)	18.713 (0.86)
<i>TRANSIDUM</i>	-62.966** (3.43)	-62.855** (3.66)	-63.02** (3.42)	-69.66** (3.48)	-52.13** (2.92)	-67.398** (3.85)	-61.305** (2.85)
<i>Polity IV</i>			-0.04 (0.04)				1.035 (0.63)
<i>Age Democracy</i>				0.055 (0.14)			0.266 (1.70)
<i>Informality</i>					-0.798 (1.50)		-0.784 (1.53)
<i>Number of INGOs</i>						-0.012 (1.08)	-0.015 (1.31)
Constant	93.223	132.27	132.68	30.494	215.19	138.24	174.66
Adjusted R <sup>2</sup>	0.408	0.470	0.453	0.443	0.601	0.471	0.583
SER	32.05	30.32	30.81	32.05	27.00	30.27	28.62
Jarque-Bera Value	0.373	0.235	0.246	0.796	0.245	0.666	0.004
Observations	38	38	38	33	36	38	31
<p>*, **, and *** show that the estimated parameter is significantly different from zero on the 10, 5, and 1 percent levels. The numbers in parentheses are the absolute values of the estimated t-statistics based on White heteroscedasticity-consistent standard errors. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera test on normality of the residuals. All regressions include age, checks, and polity iv as standard explanatory variables. "LP" indicates the lay participation variable that is interacted.</p>							

Table 5: Use of State Courts Regressed on Single Components of State Court Quality Aspects

Dependent Variable: Percentage of All Disputes Resolved in State Courts							
	1	2	3	4	5	6	7
<i>Independent Variables</i>							
<i>TRANSIDUM</i>	11.002* (2.76)	11.099** (2.89)	8.077 (1.69)	8.667(*) (1.90)	12.094** (2.91)	8.860(*) (1.87)	16.073** (4.23)
<i>GDP</i>	2.18E05 (0.05)	4.75E05 (0.11)	0.000 (1.20)	0.001 (1.08)	0.000 (0.88)	0.000 (0.73)	-0.001 (1.55)
<i>COMMON LAW</i>	-13.516* (2.44)	-11.057* (2.39)	-5.677 (1.45)	-6.753(*) (1.71)	-12.008** (2.84)	-6.698 (1.46)	-13.566* (2.69)
<i>ARBITRATION POSSIBLE</i>	4.37* (2.68)	4.458** (2.75)	4.569* (2.60)	4.327* (2.60)	4.923** (2.99)	4.426* (2.48)	5.287** (3.48)
<i>Courts Fair and Impartial</i>	-8.642** (3.48)						
<i>Courts honest</i>		-8.623** (4.27)					
<i>Courts quick</i>			-1.743 (0.60)				6.656* (2.34)
<i>Courts affordable</i>				-4.005 (0.96)			
<i>Courts consistent</i>					-10.072** (4.36)		-19.715** (5.39)
<i>Courts able to enforce</i>						-1.624 (0.43)	8.373* (2.52)
Constant	30.73	31.39	3.660	11.476	39.440	2.475	14.400
Adjusted R <sup>2</sup>	0.439	0.475	0.273	0.298	0.473	0.275	0.540
SER	8.272	8.001	9.420	9.252	7.976	9.405	7.447
Jarque-Bera Value	4.036	11.02**	4.671(*)	5.639	7.241*	4.131	10.99**
Observations	33	33	33	33	32	33	32

\*, \*\*, and \*\*\* show that the estimated parameter is significantly different from zero on the 10, 5, and 1 percent levels. The numbers in parentheses are the absolute values of the estimated t-statistics based on White heteroscedasticity-consistent standard errors. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera test on normality of the residuals. All regressions include age, checks, and polity iv as standard explanatory variables. "LP" indicates the lay participation variable that is interacted.



Table 6: Use of State Courts Regressed on De Facto Judicial Independence

<b>Dependent Variable: Percentage of All Disputes Resolved in State Courts</b>							
<i>Independent Variables</i>	1	2	3	4	5	6	7
<i>DE FACTO JI</i>	17.360* (2.70)	17.699* (2.61)	20.032** (3.03)	18.060(*) (1.85)	17.323* (2.81)		
<i>ARBITRATION POSSIBLE</i>	4.060 (1.61)	4.466(*) (2.02)	5.530* (2.19)	4.243 (1.25)	4.210 (1.65)		
<i>GDP</i>	0.001 (1.51)	0.001 (1.37)	0.001 (1.85)	0.001 (1.05)	0.000 (0.46)		
<i>COMMON LAW</i>	-7.206 (1.51)	-7.238 (1.51)	-3.290 (0.72)	-7.207 (1.28)	-6.524 (1.32)		
<i>TRANSIDUM</i>	6.566 (0.22)	5.885 (0.98)	5.978 (0.98)	6.843 (1.41)	9.718(*) (1.84)		
<i>Polity IV</i>		-0.156 (0.50)					
<i>Age Democracy</i>			0.174 (1.30)				
<i>Informality</i>				-0.027 (0.12)			
<i>Number of INGOs</i>					0.006* (2.66)		
Constant	-13.00	-13.83	-366.95	-12.017	-18.439		
Adjusted R <sup>2</sup>	0.393	0.365	0.412	0.323	0.445		
SER	8.703	8.901	8.735	9.197	8.324		
Jarque-Bera Value	2.841	3.075	2.601	2.337	3.824		
Observations	25	25	25	24	25		
<p>*, **, and *** show that the estimated parameter is significantly different from zero on the 10, 5, and 1 percent levels. The numbers in parentheses are the absolute values of the estimated t-statistics based on White heteroscedasticity-consistent standard errors. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera test on normality of the residuals. All regressions include age, checks, and polity iv as standard explanatory variables. "LP" indicates the lay participation variable that is interacted.</p>							

## Appendix 1: Description of Variables Used

<b>AFF_CRT:</b> Courts affordable; 1 = always, 6 = never; source: World Bank (****); World Business Environment Survey.
<b>AGE DEMOCRACY:</b> Age of democracy defined as $AGE = (2000 - DEM\_AGE) / 200$ , with values varying between 0 and 1.
<b>ARBITRATION POSSIBLE:</b> The sum of 3 dummy variables: (1) New York Convention, equal to 1 if a country has ratified, 0 otherwise; (2) 1 if a country has passed legislation based on UNCITRAL model law domestically, 0 otherwise; (3) 1 if a country has ratified the ICSID convention, 0 otherwise; source: homepage of respective conventions/organizations.
<b>CHECK:</b> Overall index for cashing in of a bounced check; source: Djankov et al. (2003); Lex Mundi Data Set.
<b>_COURT:</b> Percentage of payment disputes resolved by court action, source: World Bank; Investment Climate Survey, question c247f.
<b>CF_CRT:</b> “Confidence in judicial system today” (1) fully agree (2) agree in most cases (3) tend to agree (4) tend to disagree (5) disagree in most cases (6) fully disagree; source: World Bank (****); World Business Environment Survey.
<b>COMMON LAW:</b> Dummy variable equal to 1 if the country belongs to the common-law tradition, 0 otherwise; source: LLSV (1999) and CIA (2005).
<b>CONFIDENCE:</b> Percentage of firms that agree with the statement “I am confident that the judicial system will enforce my contractual and property rights in business disputes”, source: World Bank (2002, 2006); Enterprise Surveys.
<b>CONFU:</b> Dummy variable for the religious tradition in a country, equal to 1 if the majority of the country’s population is Confucian/Buddhist/Zen, 0 otherwise; source: CIA (2000).
<b>DE FACTO JI:</b> An objective indicator of de facto judicial independence based on data from 1960 through 2000; the indicator is the simple average of 8 variables; source: Feld and Voigt (2006).
<b>DISPUTERES:</b> Of all firms that claimed to be members of a business association or a chamber of commerce and who stated that the resolution of disputes had some value, the percentage of firms that claimed that it had moderate value was added to the percentage of firms that claimed it had major value multiplied by two which was added to the percentage of firms that claimed it had crucial value multiplied by three; source; World Bank; Investment Climate Survey, question c225.
<b>ENF_CRT:</b> Enforceability of court decisions; 1 = always, 6 = never; source: World Bank (****); World Business Environment Survey.
<b>FI_CRT:</b> Courts fair and impartial; 1 = always, 6 = never; source: World Bank (****); World Business Environment Survey.
<b>GDP:</b> Per capita GDP in 2000, source:
<b>HU_CRT:</b> Courts honest; 1 = always, 6 = never; source: World Bank (****); World Business Environment Survey.
<b>INFORMALITY:</b> Percentage of sales reported by business for tax purposes; source: World Bank; World Bank Enterprise Surveys (between 2002 and 2005)
<b>NUMBER OF INGOS:</b> Number of International Non-Governmental Organizations active in a country in 2000; source: Pamela Paxton, Ohio State University.
<b>POLITY IV:</b> Factually realized level of democracy with -10 = “perfect” autocracy and 10 = perfect democracy; source: Polity IV Dataset
<b>PROT80:</b> Percentage of the population in a country professing the Protestant religion in 1980 (younger states are counted based on their average from 1990 to 1995); source: La Porta (1999) and CIA (2005) for Lithuania, Nauru, Marshall, and San Marino.
<b>Q_CRT:</b> Courts quick; 1 = always, 6 = never; source: World Bank (****); World Business Environment Survey.
<b>TRANSIDUM:</b> Dummy variable equal to 1 if the country is in transition, 0 otherwise. All countries in Central and Eastern Europe plus Cambodia and Syria are coded 1.