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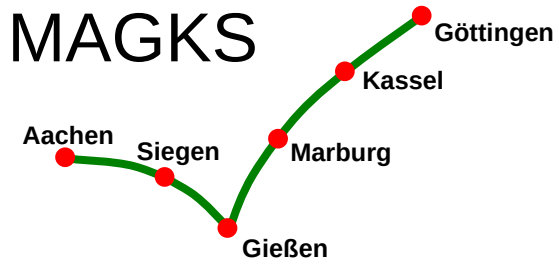

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How to Measure the Rule of Law

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Abstract:

I argue that the rule of law consists of many dimensions and that much information is lost when variables proxying for these dimensions are simply aggregated. I draw on the most important innovations from various legal traditions to propose a concept of the rule of law likely to find general support. To make the concept measurable, an ideal approach is contrasted with a pragmatic one. The pragmatic approach consists of eight different dimensions. I show that the bivariate correlations between them are usually very low, evidence that more fine-grained indicators of the rule of law, rather than a single hard-to-interpret one, are necessary for its measurement. The paper presents a list of desirable variables that could improve the measurement of various aspects of the rule of law.

Key words: Rule of Law, Institutions, Governance, Measurement, Formal vs. Informal Institutions.

JEL classification: B41, C81/82, H11, K00, O17, O43, O57.

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How to Measure the Rule of Law

1 Introduction

Some 10 years ago, Carothers (1998) announced a "Rule of Law Revival," and ever since, the rule of law has been high on the agenda of those interested in speeding up development in so-called developing countries. The term has taken on an almost mythical quality: most experts involved in development policies agree that advances in the rule of law are desirable. Yet, myths, while sometimes nearly universal, are nearly universally differently interpreted. Could it be that all these experts agree on the importance of the rule of law only because each of them defines it differently? If this is indeed the case, consensus as to its importance is superficial, basically meaningless.

Economists, too, have played a role in the revival of the term, although they are primarily interested in the *consequences* of the rule of law, rather than its establishment. They ask whether a high degree of its realization has positive economic consequences, such as higher rates of economic growth and higher levels of income. To answer this question empirically, adequate measures for the rule of law are key. However, the desire, or need, for adequate measures is not confined to academia; for example, in the "real" world, some donor organizations make their aid payments conditional on a number of governance aspects, and thus being able to accurately measure them could have a substantial influence on important money streams.

Ideally, any indicator proxying for a complex concept like the rule of law should have a strong theoretical foundation. To this end, I begin this paper with a short survey highlighting the most important aspects of the various rule of law traditions. At least two dimensions come to the fore: (1) different legal traditions have developed slightly different concretizations of the concept and (2) a "thin" version of the concept is usually separated from a "thick" one. In Section 3, I present a proposal for how the rule of law can be measured in which I distinguish between two approaches: the first one describes an "ideal" measure that could be implemented if data-gathering costs were no problem; the second one is a more practical approach that can be employed with whatever data are available. Section 4 compares my own indicator with other frequently used proxies, thus serving to provide a better "feel" for the characteristics of our new indicator. Section 5 concludes.

The development community has lately taken an interest in "actionable indicators." On the one hand, this makes perfect sense, implying as it does that indicators should not consist of an intransparent mix of aspects. On the other, such an approach could lead to

dangerous hubris, in that measurability might be taken to mean changeability. I believe that this latter possibility is very dangerous indeed. Simply because we can measure something, does not mean that we can change it for the better. This paper is thus concerned only with issues of measurement and not with change. It therefore does not discuss reform strategies, implementation difficulties, or the like.

2 The Rule of Law: A Synthesis

The rule of law notion can be traced back to Aristotle. There are hundreds of publications on the subject, covering virtually every aspect that can be imagined (see, for some of the most recent, and best HiiL 2007; Ohnesorge 2007; Tamanaha 2007). Many have incorporated the concept into their ideologies. This paper is more focused on positive science than on ideology, however, and thus the following discussion is an attempt to identify the most basic traits of the concept and the possible means for their measurement.

Berman (1983, 11ff.) points out that the notion of law is not an absolute but a historical one. This implies, according to Grote (1999, 271), that the "ideal of rule of law is therefore dependent on the prevailing political and legal traditions for its implementation." In other words, we can come up with a list of attributes that many scholars will agree on today, but this list will in all likelihood be different from the list that academics with the same aim in mind would have come up with a hundred years ago and different still from the list that academics will come up with another hundred years in the future. Before we take a snapshot of what the rule of law notion can be more or less agreed upon to look like to today's scholars, let us have a quick look at contributions from various areas of the world to achieve a better understanding of the different roots of the concept.

2.1 Country of Origin Influences

This section presents a very brief overview of a number of specific rule of law traditions. It is based primarily on Hayek (1960) and Grote (1999), but incorporates a few additional sources as well. This short description serves as a basis for distilling out the commonalities of the various approaches that can then be used to fashion a core definition of the rule of law upon which scholars belonging to the various traditions can agree.

The English were the first to make a substantial contribution to the rule of law. Among their most important contributions are the following:

- No special courts as the existence of such increases the likelihood that like cases will not be treated alike and they can be (mis)used by rulers eager to sanction particular individuals. The situation that led to implementation of the principle was dissolution of the Star Chamber in 1641.[1]
- Closely related to this is the necessity for the judiciary to be independent from both the legislature and the executive.
- This is directly connected with the notion of separation of powers, which allocates specific powers to each of the three government branches.
- During the 17th century, the principle evolved that there cannot be a crime (and consequently a punishment) without a law valid at the time the act was committed (*nulla poena sina lege*).
- Simultaneously, the discretion of the administration was constrained by law.
- John Locke emphasized the necessity of laws being permanent; otherwise, they could not serve to increase the predictability of state action.

The English, however, failed to adequately deal with (at least) two issues, namely: (1) parliamentary sovereignty, which does not constrain parliament in the kinds of laws it passes, and (2) the manner in which the separation of powers was implemented. In common law, judges not only interpret legislation, but also have the power to develop it further.[2] Under a modern interpretation of the separation of powers, this power is, of course, confined to the legislature.

U.S. contributions to the rule of law notion are rooted in the experiences, and consequent reactions to, its settlers had with English rule during the 18th century. The following contributions are attributed to what eventually became the United States:

- Constitutionalism, which increases the predictability of state action because the rights of citizens as well as those of the state are written down. Constitutions can constrain the law-making powers of the legislature. They can further specify the criteria that must be met for a law to be valid. If constitutions can be changed only via supermajorities, constitutional change will occur less often, increasing its permanence and, hence, the predictability of state action.[3]

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1 Originally set up to enforce laws against people so powerful that ordinary courts would not convict them, the Star Chamber had evolved into a political weapon and became the symbol for the misuse of courts by the English monarchy.

2 This is also the case in civil law countries, the difference being that precedent is binding only in common law.

3 According to Hayek (1960, 181), constitutionalism means that "all power rests on the understanding that it will be exercised according to commonly accepted principles, that the

- The Bill of Rights, added to the constitution, sets out a number of basic rights intended to protect the individual from state interference. Examples are the prohibition of *ex post facto* legislation and of double jeopardy. It also establishes due process.
- Closely related to constitutionalism is the notion of judicial review: if legislators pass laws that are not within the confines of the constitution, the judiciary has the power to declare them unconstitutional and void.
- Hayek (1960, 192) sums up the American notion of the rule of law: "The chief point is that in the United States it has been established that the legislature is bound by general rules; that it must deal with particular problems in such a manner that the underlying principle can also be applied in other cases; and that, if it infringes a principle hitherto observed, though perhaps never explicitly stated, it must acknowledge this fact and must submit to an elaborate process in order to ascertain whether the basic beliefs of the people really have changed."

Compared to England and the United States, Germany was a laggard on the rule of law front. By the time the country began to realize its own version of the rule of law, the administration was more powerful and prevalent than were the administrations of England and the United States when they started their development in this direction. In Germany, constraining the powers and the discretion of the administration was an important additional challenge. The right to challenge the legality of administrative acts can be considered Germany's greatest contribution to the rule of law concept. Other tools primarily developed in Germany include the protection of confidence, the principle of the least possible intervention, and the principle of proportionality. Grote (1999, 280) observes that the "notion was increasingly defined in a formal way. According to this view, the '*Rechtsstaat*' was not concerned with the purpose and content of the state but only with the method and character of their realization." This formal notion was done some harm by the Nazis, who gave lip service to the formal notion, but violated some of its most important values by their actions.

2.2 Thin vs. Thick Notions

In the literature, there is often a distinction between a thin (narrow, formal) and a thick (broad, substantive) version of the rule of law concept (e.g., HiiL 2007). Whereas the thin version contains only the bare minimal necessities, the thick version contains other desirable traits, such as democracy or human rights. I focus on possible measures of the

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persons on whom power is conferred are selected because it is thought that they are most likely to do what is right, not in order that whatever they do should be right."

thin version of the concept for two main reasons. (1) There appears to be a better chance of achieving consensus among scholars if the minimalist version is the starting point. (2) A thick version always risks combining several concepts that would be better left separate. For example, if democracy is included into the rule of law and turns out to be significant in explaining differences in growth rates, little is won because we do not know whether the significance is due to formal traits of the law or to the way legislators are chosen.

In proposing a synthesis that combines the most generally accepted traits of the various national rule of law traditions, we do not draw on any formal algorithm but simply aim at identifying commonalities. We propose to organize these most important traits into two categories: (1) formal characteristics that rules should have to qualify as valid legislation, on the one hand, and (2) means used to secure the proper implementation of these rules on the other.[4] To be as precise as possible, at the end of this section, we also discuss a number of concepts that might be closely related to the rule of law but need not be part of it on theoretical grounds.

2.2.1 Attributes of Law

Recent literature dealing with the rule of law concept often incorporates the definition of it offered by Hayek in 1944.[5] However, we prefer Hayek's later (1960) version because it is more detailed and more elaborate. Drawing on the Greek roots of the concept, Hayek (1960, 164) points out that the rule of law is often contrasted to the rule of man. The concept is sometimes called "government under the law" because the law is to be applied equally to all persons (*isonomia*), government leaders included. According to the rule of law, no power used by government is arbitrary, all power is limited. Drawing on Immanuel Kant (1797/1995)—and the German philosophical tradition—laws should fulfill the criterion of *universalizability*, which has been interpreted to mean that the law be *general*, i.e., applicable to an unforeseeable number of persons and circumstances, *open*, i.e., not prescribing a certain behavior but simply proscribing a finite number of actions, and *certain*, i.e., anyone interested in discovering whether a certain behavior is

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4 This distinction is reminiscent of the two components that institutions consist of, namely: (1) a rule and (2) the threat of sanction in case of noncompliance with the rule.

5 According to Hayek, the rule of law means that "government in all its actions is bound by rules fixed and announced beforehand—rules which make it possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances, and to plan one's individual affairs on the basis of this knowledge."

legal can do so with a fairly high chance of being correct and can furthermore expect that today's rules will also be tomorrow's rules.

Hayek (1960, 206) points out that these basic principles of the rule of law are not laws themselves, but comprise instead a "meta-legal doctrine or a political ideal." This distinction has important implications for the task of empirically measuring the realized degree of the rule of law, which is no mean feat because informal norms are systematically more difficult to ascertain than formal ones. Lon Fuller's Storrs Lectures (1969, 44–91) were a contribution to the debate on the shortcomings of legal positivism. That debate itself is not of relevance here, but what is of interest is Fuller's list of eight traits that rules should have because the contents of this list can be read as necessary components of the rule of law. According to Fuller's list, laws must be (1) general, (2) publicly promulgated, (3) prospective (i.e., not retroactive),[6] (4) clear, (5) consistent (i.e., not contain any contradictions), (6) practicable (i.e., not demand the impossible), (7) constant over time, and (8) congruent with the actions of officials.[7]

2.2.2 Provisions Used to Secure Implementation of the Rule of Law

In describing the means used to secure implementation of the rules, we can rely on some of the traits set out in Section 2.1. The most frequently mentioned traits are an independent judiciary, often including judicial review, means of making judges accountable to the law, separation of powers, the right to a fair trial (including the absence of bias, a reasonable period within which the case is heard and decided), and independent prosecutors.[8]

2.2.3 Notions Better Kept Apart

We now discuss a number of concepts that some authors perceive as being part of the rule of law concept but that we prefer not to include in order to be as precise as possible. These are (1) law and order, (2) the degree to which citizens respect formal legislation, (3) democracy, (4) a market economy, and (5) human rights.

Supporters of law and order usually favor a tough criminal justice system, implying harsh penalties, even, for some, the extreme of capital punishment. The rationale is

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6 This is interpreted as including the principle of *nulla poene sine lege* described above.

7 Buchanan and Congleton (1998) is a description of both the rationale as well as the ensuing desirable traits of legislation that economists will find very accessible.

8 This list was partially inspired by the list provided by HiiL (2007).

generally that harsh punishment acts as a deterrent. However, many of the means by which a tough criminal system can be achieved are not compatible with some components of the rule of law. For example, if littering is a capital offense, it is indeed quite likely that there will be far fewer beer cans tossed by the roadside, but such a punishment is incompatible with the principle of proportionality. Thus, we refrain from interpreting law and order as a component to the rule of law.

The degree to which citizens demonstrate respect for the law by obeying it is often said to be part of the rule of law. We prefer to keep the two separate: the rule of law as defined here deals with laws' formal qualities as well as with the ways the state secures their implementation. It is, thus, interested in the behavior of an only limited number of actors, namely, those who are part of government broadly conceived. Citizens and their behavior are a separate issue.

Logically, a rule of law constitution does not necessitate that the political system be democratic. Since we are here interested in identifying preconditions for maintaining the rule of law, no particular assumption concerning the political system will be made.

Hayek (1960, 227) argues that by necessity the rule of law would imply a market economy since decisions by the government as to who is to produce what in which quantities and so forth cannot be subsumed under general rules but imply arbitrary discrimination between persons. To avoid any unnecessary ideologization of the term, we prefer not to interpret rule of law as broadly as does Hayek. In other words, we do not assume the rule of law to encompass a market economy.

Viewed from some angles, the connection between the rule of law and human rights is an intricate one. However, taking a broad perspective on human rights shows that they most certainly fall into a different category than the rule of law: positive rights (e.g., to adequate housing, an occupation, or a paid vacation) constitute claims vis-à-vis the state. To implement them, the state needs to deviate from universal rules by, for example, compelling firms to hire people. Further, citizens who meet certain criteria need to be financially supported by citizens who do not meet these criteria (e.g., those in search of adequate housing by those who own houses). Positive rights are thus difficult to reconcile with universalizable rules as proposed by Kant. On the other hand, the right to a fair trial certainly implies the absence of torture, political killings, disappearances, and the like. We thus propose including only basic human rights in the rule of law notion.

3 A Proposal for a Theory-Based Rule of Law Measure

Before proposing how the rule of law could be measured, we discuss a number of criteria for the construction of such measures.

3.1 Criteria for Construction of Measures

Assuming that the effects of institutions are due both to their formal characteristics and their actual implementation implies that any attempt at measurement should take both aspects into account. Suppose the formal qualities conform only partially to the ideal attributes. Yet, if they are meticulously enforced, they may still provide the important characteristic of predictability, even though the actual protection may be little. It can thus be hypothesized that the two dimensions (the formal attributes of legislation and the degree of enforcement) are in a substitutive relationship and some "iso predictability curve" can result as a consequence of their interaction.

This argument implies that, ideally, both *de jure* and *de facto* institutions should be measured. Otherwise, it is impossible to separate the effect of the formal qualities of legislation from the effects due to its enforcement. Neglecting to measure *de jure* institutions completely implies that they are identical everywhere, which is obviously not the case.

The predictability-enhancing effect of the rule of law largely depends on its actual implementation and enforcement. To ascertain whether institutions have a significant influence on any outcome variables, it is thus necessary to take their actual implementation and enforcement explicitly into account. Institutions that formally constrain behavior substantively but are not or only partially enforced are expected to constrain behavior only to a limited degree. Actual enforcement depends on the behavior of those mandated to enforce an institution. In short, measures aiming at including the actual enforcement of institutions need to reflect the behavior of those who participate in their enforcement, which include most obviously judges and prosecutors, but also police and prison staff.

Furthermore, relying on objective data—rather than on subjective evaluations—has the advantage that the measures can be replicated and modified by anyone interested in doing so. Objective variables are also superior to subjective ones because the latter are tainted, at least to some degree, by the respondent's own theories, ideologies, prejudices, and so forth. However, sometimes it will be extremely difficult or even impossible to obtain objective data and in such cases, pragmatic arguments in favor of subjective variables can be advanced.

3.2 An "Ideal" Measure

An ideal measure for rule of law would reflect the two components discussed above: (1) the quality of the rules and (2) the quality of the organizations entrusted with enforcing them. The formal quality of legislation is reflected not only in the criteria set out by Kant (general, open, and certain) and Fuller, but also in the presence/absence of some overarching norm as spelled out by Hayek. Measuring the degree to which rules are indeed general, clear, consistent, practicable, and so on is almost impossible, however, and the same is true for the presence of the Hayekian meta-legal doctrine. We thus propose more pragmatic measures for the various components of the concept.

3.3 A "Pragmatic" Measure

A "perfect" or "complete" rule of law has never and probably will never be realized. Men and women have been treated differently, as are members of different races. Successful rent seeking that leads to tax exemptions or the payment of subsidies is another example of different treatment for people in identical situations. The rule of law should therefore be understood as an ideal type in the sense of Max Weber (1922/1947). The degree to which the rule of law is realized at different places at different times can, however, be measured and these degrees of realization can be compared with each other.

As briefly hinted at above, measuring the formal attributes of law is much more difficult than measuring the provisions used to secure its implementation. It is even more difficult to measure extra-legal political ideas or meta-legal doctrine. Focusing on enforcement is therefore justified for pragmatic reasons. However, practicality is not the only justification: many governments are eager to demonstrate that they take the rule of law seriously, and thus variation in the formal attributes of law is expected to be less than in the provisions used to implement it.

Also, at the end of the day, it is the actual enforcement of law that counts, not how elegantly and solemnly it is set out in some document. Solemn declarations alone will very rarely influence the choices real people make, whereas the actual behavior of state representatives will. This is yet another justification for focusing on *de facto* implementation as opposed to *de jure* rules.

The rule of law consists of many dimensions, many of which are also multifaceted (e.g., judicial independence or fair trials). It is unclear whether anything can be gained by aggregating the various aspects into a single broad indicator. Looking at the components individually also has the advantage of making unnecessary any sort of aggregation rule

that—absent a complete and generally accepted theory—would necessarily be arbitrary.[9]

Finding variables that reflect the degree to which a country's legislation conforms to the formal attributes of the rule of law is almost impossible. We thus decided to rely on an outcome variable that is, on its face, subjective. If legislation meets the criteria spelled out by both Kant and Fuller, then government action should be predictable for interested citizens. Predictability is, obviously, not a trait of the rule of law but should be its consequence when most of its criteria are met.

In a survey instrument dubbed the "Investment Climate Survey," the World Bank (2009) asked up to 1,000 firm representatives in each of 46 countries whether they perceived government action to be predictable ("In general, government officials' interpretations of regulations affecting my establishment are consistent and predictable." To what extent do you agree with this statement? Do you 1. Fully disagree … 6. Fully agree). If the formal traits that characterize the rule of law lead to predictability, the answers to this question can serve as a general proxy for them. This is, admittedly, a crude proxy because predictability will be co-determined by a host of other factors but it has the one great advantage of being available.

Hayek (1960, 206) describes the rule of law as a "meta-legal doctrine or political ideal." If that ideal is shared not only by politicians but by most of the population, it might be reflected in opinion polls. The World Values Survey has been administered in four waves in as many as 78 countries. It contains a number of items that describe various ways to govern a country. Agreement with these is incompatible with the rule of law and the items thus could be considered as something like an "incompatibility index." The three statements respondents were asked to evaluate are: "Having a strong leader who does not have to bother with parliament and elections"; "Having experts, not government, make decisions according to what they think is best for the country"; and "Having the army rule." The respondents could choose between various options to answer the questions, ranging from "very good" to "very bad". Higher levels of agreement are here interpreted as lower endorsement of the rule of law by the

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[9] One would need to conjecture about the necessary conditions for the rule of law, about sufficient conditions, the possibility of trading certain traits off against each other, and so forth. Not only would this be very messy, not much of interest will come of it.

population. These are obviously not ideal for measuring attitudes toward the rule of law, but nevertheless might contain some information of interest.[10]

Another way to ascertain the formal endorsement of the rule of law is to analyze a country's constitution. In a huge project covering many dimensions of constitutions, Elkins et al. (2008) examine the conformity of a country's constitution with a number of rule of law principles. For example, they ask whether the constitution refers to equality before the law or nondiscrimination. Almost all constitutions do, so nothing is gained by including that variable as it does not allow us to discriminate between countries. However, such uniformity is not found when it comes to groups that are explicitly mentioned in the constitution as being protected from discrimination. The analyzed constitutions list up to 14 different groups. This is somewhat odd because if equal treatment is guaranteed in general, there should be no need to mention specific groups as enjoying equal treatment. It could be inferred, perhaps, that the explicit mentioning of a group is evidence that some discrimination against the groups explicitly mentioned occurred in the past.

In the realm of actual enforcement, we look at seven separate categories: (1) separation of powers, (2) judicial review, (3) judicial independence, (4) judicial accountability, (5) prosecutorial independence, (6) fair trials, and (7) basic human rights. Many of these categories are closely related but we are convinced that it is useful, at least at first, to keep them as separate as possible.

1 The Separation of Powers

A separation of powers allocates specific powers to specific branches, thus diluting the power of each branch and making transgressions against the formal rule of law less likely. Formally, presidential systems have a higher degree of separation of powers than do parliamentary ones, but given that both forms of government can uphold the rule of law, it makes little sense to draw this distinction. Therefore, we rely on an indicator proposed by Beck et al. (2001) that reflects the number of actual veto players. Here, we use the average over the years from 1993 to 1997.

2 Judicial Review/Constitutional Review

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[10] Although elections refer to attitudes toward democracy, preferences for a strong executive not checked by the legislature can be interpreted as incompatible with the separation of powers, an important dimension of the rule of law.

If courts have the power to review whether legislation enacted by parliament conforms to the constitution, law properties that are formally protected by the constitution are more likely to be actually enforced.

As an indicator for judicial review (constitutional review), we draw on a dataset provided by La Porta et al. (2004). The two variables are defined by La Porta et al. as follows: "Judicial Review: This variable measures the extent to which judges (either Supreme Court or constitutional court) have the power to review the constitutionality of laws in a given country. The variable takes three values: 2—if there is full review of constitutionality of laws, 1—if there is limited review of constitutionality of laws, 0—if there is no review of constitutionality of laws." Constitutional review is "computed as the normalized sum of: (i) the judiciary review index (ii) the rigidity of the constitution index." Hence, both are *de jure* indicators and it must be kept in mind that they might be measuring good intentions rather than actual behavior.

3 Judicial Independence

Judicial independence (JI) implies that judges can expect their decisions to be implemented regardless of whether they are in the (short-term) interest of other government branches upon whom implementation depends.[11] In cases of conflict between government and the citizens, the citizens need an organization—the judiciary—that can adjudicate between the two impartially. The judiciary is not confined to ascertaining the constitutionality of newly passed legislation (judicial review, constitutional review), but also has the power to investigate and decide whether the representatives of the state have followed procedural devices intended to safeguard the rule of law.[12] If the judiciary is not independent of the executive and legislative

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11 It further implies that judges do not need to fear negative consequences as the result of their decisions, such as (a) being expelled, (b) being paid less, or (c) being made less influential.

12 Alexander Hamilton puts this succinctly in the Federalist Paper #78 (Hamilton, Madison, and Jay, 1788/1961, 466): "The complete independence of the courts of justice is peculiarly essential in a limited Constitution. By a limited Constitution, I understand one which contains certain specified exceptions to the legislative authority; such, for instance, as that it shall pass no bills of attainder, no ex post facto laws, and the like. Limitations of this kind can be preserved in practice no other way than through the medium of courts of justice, whose duty it must be to declare all acts contrary to the manifest tenor of the Constitution void. Without this, all the reservations of particular rights or privileges would amount to nothing."
Montesquieu (1748/1989) is also very outspoken: "…, there is no liberty, if the judiciary power be not separated from the legislative and executive. Were it joined with the legislative, the life and liberty of the subject would be exposed to arbitrary control; for the judge would

branches, there will be a government of people, not a government of the law, resulting in distrust of the rule of law on the part of citizens.

An independent judiciary is also important for settling conflicts between various government branches. In the absence of an impartial arbiter, conflicts between government branches are most likely to develop into simple power games. An independent judiciary can keep them within the rules laid out in the constitution.

As an indicator for JI, we draw on Feld and Voigt (2003), who present an indicator for *de facto* JI based on eight variables. These include whether actually observed terms of office are as long as they should be according to the letter of the law, whether the real income of judges has remained at least constant in real terms between 1960 and 2000, whether the same holds with regard to the judicial budget, and whether the other branches of government have ever refused to implement decisions of the highest court of a country. This indicator is available for 75 countries.

4 Judicial Accountability

Of course, the judiciary should not be unconstrained; it must be limited to interpreting the law, and not be allowed to create it. It needs to be held just as accountable as are the other branches of government. Too much independence poses just as grave a danger to the rule of law as too little. Completely unconstrained judges might take too long to render a decision, might ignore certain evidence, might base a decision on irrelevant legislation, or simply make a patently false decision. Thus, independent judges are a necessary condition for the rule of law, but they are also a threat to it.[13]

Many scholars argue that JI and judicial accountability (JA) are in conflict. Elsewhere, I argue (Voigt 2008) that this does not necessarily have to be the case: judges can be independent from both the other government branches and the conflicting parties but be accountable to the letter of the law. An accompanying JA measure could include aspects

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be then the legislator. Were it joined to the executive power, the judge might behave with violence and oppression."

13 This danger was precisely described by Brutus in Anti-Federalist Paper #11: "It is, moreover, of great importance, to examine with care the nature and extent of the judicial power, because those who are to be vested with it, are to be placed in a situation altogether unprecedented in a free country. They are to be rendered totally independent, both of the people and the legislature … No errors they may commit can be corrected by any power above them … nor can they be removed from office for making ever so many erroneous adjudications."

such as the existence and enforcement of judicial codes of conduct, the existence and work of watchdog agencies, and so forth.[14]

JI is defined as independence from other branches of government. JA should make sure that no conflicting party is able to "buy" a favorable court decision. Absent any more specific measures of JA, we draw on another subjective measure. The Global Competitiveness Report contains the question: "In your country, how commonly would you estimate that firms make undocumented extra payments or bribes connected with getting favorable judicial decisions?" Respondents' answers were coded on a seven-point scale, with "common" coded 1 and "never occurs" coded 7. Given that the values (and JA) are high, corruption among judges should be low.

5 Prosecutorial Independence

Prosecutors are crucial to the criminal justice system. One precondition for implentation of the rule of law in this area is that like cases are treated alike. If government has any influence on who is prosecuted in what way, the rule of law is likely to be broken as government could act to keep certain crimes from being prosecuted (those committed by members of the government and its supporters) and at other times call for the prosecution of crimes never committed (if doing so would weaken the opposition).

The indicator we rely on to capture prosecutorial independence (PI) is taken from Aaken et al. (2008) and is based on seven *de facto* variables, including the number of times prosecutors have been forced to retire against their will during a given period and the development of their real income as well as the real budget of the procuracy. The indicator's construction is similar to the *de facto* JI indicator described above. It is available for 78 countries.

6 Fair Trial

Hathaway (2002) provides a fair trial index that contains elements such as right to appeal, public trial, timeliness, the presumption of innocence, the right to an interpreter, and whether the charges are known before trial begins. To generate her indicator, she relied on the Human Rights Reports issued by the U.S. State Department. These reports are verbal and thus need to be quantified. Two research assistants coded the data on a four-point scale, intercoder reliability was 82%. The indicator is available for five years (1985, 1988, 1991, 1994, and 1997) and for as many as 160 countries.

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[14] Garoupa and Ginsburg (2009) analyze both the causes and the consequences of the *de jure* traits of judicial councils.

This indicator is definitely not ideal: it is subjective and hence expected to be influenced by what the observers expected to see in a country. Ideally, we would thus prefer a more objective measure.

7 Basic Human Rights

It is unconceivable that a minimum level of the rule of law could coexist with political disappearances, torture, political killings, and so forth. We therefore integrate the absence of such atrocities as the final dimension of measure of the rule of law. The data are taken from Cingranelli and Richards (2004) and we use an average over five criteria (state of emergency or martial law, political killings, disappearances, torture, and political prisoners). The average is intended to reflect the practice in up to 162 countries for the period from 1990 to 1997.

As mentioned in the introduction to the theoretical part of this paper, the perception of law changes over time as does the perception of the rule of law. It is conceivable that future measures will find it appropriate to consider additional dimensions of the rule of law. The existence of Freedom of Information Acts could be one such dimension. Requiring the administration to make most of its documents public, should increase its accountability to the law. Similar arguments could be made with regard to ombudspersons and the like.

4 Bivariate Correlations of Our Measure with Other Commonly Used Measures

4.1 Partial Correlations of the Single Components

We argue above that—for the time being—it makes sense to keep the seven (eight, if judicial review and constitutional review are counted separately) dimensions developed here separate. To ascertain whether they should remain separate after having had a look at the data, we calculate their bivariate correlations with each other.

Table 1: Correlations between the various dimensions of the rule of law

Pairwise correlations	PREDICT	DISCRIM	JI	JA	SOP	JR	CR	FAIR	BHR	PI
Government predictable? (PREDICT; 1–6, 6 = fully agree)	1.00 (46)									
# of groups protected from discrimination? (0–14)	0.04 (46)	1.00 (138)								
Judicial independence (JI; 0–1, 1 = completely independent)	0.26 (32)	-0.24* (81)	1.00 (81)							
Judicial accountability (JA; 1–7, 7 = best possible score)	-0.03 (32)	-0.04 (53)	0.01 (38)	1.00 (53)						
Separation of powers (SOP; number of veto players)	-0.29* (57)	-0.05 (137)	-0.02 (81)	0.07 (52)	1.00 (137)					
Judicial review (JR; 0–2, 0 = no review)	0.03 (15)	-0.02 (56)	-0.04 (50)	-0.09 (25)	-0.08 (56)	1.00 (56)				
Constitutional review (CR)	-0.12 (15)	-0.07 (56)	0.01 (50)	-0.27 (25)	0.04 (56)	0.83* (56)	1.00 (56)			
Fair trial (FAIR; 0, 1/2, 1, 1 = frequent problem)	-0.20 (58)	-0.09 (134)	-0.47** (78)	-0.28* (50)	-0.20* (133)	0.13 (54)	0.02 (54)	1.00 (134)		
Basic human rights (BHR; 0 = frequent problem, 2 = no problem)	0.03 (58)	-0.00 (138)	0.28* (81)	0.21 (53)	0.28** (137)	-0.13 (56)	-0.05 (56)	-0.64** (134)	1 (138)	
Prosecutorial independence (PI; 0–1, 1 = completely independent)	0.16 (37)	-0.16 (74)	0.32* (59)	-0.03 (38)	0.07 (73)	-0.20 (39)	-0.15 (39)	-0.31** (72)	0.35** (74)	1.00 (74)

Notes: The values in parentheses are the number of observations; *(**) indicates significance at the 5(1)% level.

Several results are noteworthy:

(1) Most of the partial correlations are quite low. This implies that the rule of law is indeed made up of various dimensions that are not necessarily highly correlated with each other. This means that it does, indeed, make sense to keep the various dimensions apart and not synthesize them into a single indicator.

(2) Predictability is a subjective indicator that is intended to proxy for the formal traits of the rule of law. Astonishingly, this variable is not significantly correlated with any other variable (except constitutional review, which is itself problematic). The number of groups explicitly mentioned in the constitution as being protected from discrimination as one formal aspect of constitutional protection is almost completely unrelated with the subjective indicator. As conjectured above, the non discrimination indicator tends to be negatively correlated with some of the *de facto* aspects, such as JI.

(3) Judicial review (JR) and constitutional review (CR) are both *de jure* variables. CR is partially based on JR, which explains why they are highly correlated. However, neither variable is highly correlated with any other of the implementation variables. This seems to be further evidence that *de jure* measures contain little information about the real world.

To ascertain whether some of the theoretically determined dimensions really do belong together empirically, it would be straightforward to run a principal components analysis.

Unfortunately, there are currently too few countries for which all variables are available to make this feasible.

4.2 Correlations with Related, but Distinct, Concepts

We argue above that it is desirable to construct an indicator that focuses on the core traits of the rule of law and does not incorporate other features that could, for example, be the consequences of the rule of law. Table 2 displays bivariate correlations between the eight dimensions of the rule of law developed above and a number of related concepts.

Table 2: Correlations between the various dimensions of the rule of law and related concepts

Correlations: bivariate, Bravais-Pearson	PREDICT	JI	JA	SOP	JR	CR	FAIR	BHR	PI
Law and order (Political Risk Services; 1–6, 6 = best score)	0.05 (50)	0.26* (74)	0.27 (48)	0.06 (118)	-0.27* (55)	-0.18 (55)	-0.49** (115)	0.40** (118)	0.40** (70)
Democracy (POLITY IV; –10 to 10, 10 = "perfect democracy")	-0.01 (58)	0.48** (81)	-0.31* (52)	0.47** (136)	0.10 (56)	0.12 (56)	-0.47** (134)	0.53** (137)	0.34** (74)
Leftist regime (0–1, 1 = leftist)	0.19 (41)	-0.13 (72)	0.40* (39)	-0.23* (119)	-0.25 (56)	-0.28* (56)	0.32** (115)	-0.18 (119)	-0.17 (61)
Civil liberties (Freedom House; 1–7, 1 = highest degree)	-0.13 (58)	-0.50** (81)	0.29* (53)	-0.29** (137)	-0.04 (56)	-0.10 (56)	0.66** (134)	-0.68** (138)	-0.43** (74)
Corruption (TI Indikator; 1–10, 1 = very corrupt)	0.22 (58)	0.47** (81)	-0.23 (53)	0.16 (136)	-0.18 (56)	-0.11 (56)	-0.62** (133)	0.59** (137)	0.47** (74)
WGI rule of law (–2 to 2, 2 = highest degree)	0.13 (58)	0.52** (81)	-0.19 (53)	0.25** (137)	-0.14 (56)	-0.06 (56)	-0.65** (134)	0.66** (138)	0.47** (74)
Common law (0/1, 1 = common law legal family)	0.01 (42)	-0.11 (81)	-0.35* (47)	-0.03 (99)	0.04 (56)	0.01 (56)	0.15 (96)	-0.08 (99)	0.21 (67)

Notes: See Table 1.

Most of the observations as to the bivariate correlations among the various aspects of the rule of law are reinforced by Table 2:

(1) The subjective variable predictability is not significantly correlated with any of the other concepts.

(2) The two *de jure* variables, JR and CR, are, again, not significantly correlated with any other concept.

(3) The variable common law is a dummy variable coded 1 if a country belongs to the common law legal family; 0 otherwise. It is motivated by the recent discussion concerning the economic relevance of legal families. The bivariate correlations show that countries belonging to the common law family do not necessarily fare better in regard to most of the traits making up the rule of law. The only exception is judicial accountability.

5 Steps Toward Better Indicators

The creation of a better indicator will need to address two issues: first, the variables already used to construct the current version of the indicator need improvement, and second, additional variables are needed to cover as yet unexplored aspects of the theoretically derived concept.

Increasing the Quality of Currently Used Variables

Judicial review and constitutional review are both *de jure* indicators. Given the various correlations they display with other traits of the rule of law as well as with related concepts, they do not appear to contain much information about the real state of constitutional review. Thus, a *de facto* variable with regard to constitutional review is needed.[15]

Regarding both judicial as well as prosecutorial independence, an increase in the number of observations would be most welcome. As to judicial accountability, we rely on a very crude proxy, namely, the absence of perceived corruption within the judiciary. A more direct variable is desirable and perhaps could be fashioned out of information on the existence of judicial calendars, the existence and enforcement of judicial codes of conduct, the existence and work of watchdog agencies, and so forth.

In investigating the behavior of judges, we distinguish between their independence from other government branches and their accountability to the law. The investigation of prosecutor behavior would benefit from a similar distinction. This would imply the creation of a variable proxying for the accountability of prosecutors.

Coding of the variables aggregated to proxy for fairness of trials is quite coarse. A more fine-grained coding would be an important improvement.

The attentive reader will have noticed that we nowhere propose the use of time-series data. This is not an oversight. It appears extremely unlikely that the degree to which the rule of law is implemented is subject to dramatic short-term changes, even though aid organizations making allocation decisions seem to believe otherwise. It could be useful to collect data every five or ten years, but shorter time periods do not promise much additional information.

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15 This will be no mean feat. Counting the number of times the highest court has struck down legislation passed by parliament will not do, as the degree of constitutionality is unlikely to be identical across countries and this indicator might, moreover, be endogenous to the existence of constitutional review if forward-looking parliamentarians are assumed, who would act in a manner to avoid being corrected by parliament.

The greatest weakness of our indicator is its coverage of the formal traits of law. We attempted to rely on (subjective) perceptions of the predictability of government action, which we conjectured would be high if government closely follows the rule of law. Yet, partial correlations with most other rule of law aspects, as well as with related concepts, are astonishingly low. Obviously, a better variable is needed. However, ascertaining to what degree laws are "general," "clear," "consistent," and so forth in an objective manner seems nearly impossible given that we are interested in these traits with regard to thousands of laws.

Fuller's list, discussed earlier, includes the necessity that laws be publicly promulgated. Here, one could inquire into the existence of government gazettes, their modus of publication, their coverage of all legislative acts, whether newly passed legislation is published on the Internet, and so on.

Fuller's list also contains the criterion that laws be constant. A "constancy" variable could be constructed to reflect the number of new and modified laws in a given year over the entire number of laws valid in a country. Various details could be used in calculating such a variable, including number of pages, number of laws, number of paragraphs, and so forth.

Another criteria on Fuller's list is that laws be consistent. A possibility here is a variable proxying for the degree of consistency as a function of the number of times courts have been busy reconciling inconsistent legislation.

6 Conclusion and Implications

In this paper, we develop a proposal for measuring the rule of law that takes into consideration the most important aspects of the concept as set out in centuries' worth of discussion across many legal contexts. Our measure consists of as many as eight different dimensions. The low bivariate correlations between these eight dimension show that they reflect, as hypothesized, very different aspects.

Several extensions of our work immediately suggest themselves. First, it would be desirable to improve the quality of the measures employed: some of them rely on subjective perceptions although objective measurement is, at least in principle, possible. Our measure for judicial accountability is just one example. Second, an increase in the number of countries for which the indicators are available would be most welcome. Third, a measure for a thick notion of the rule of law concept could be explored.

Developing an indicator to test a theory is never *l'art pour l'art*, and this is true of our work, as well. In the "real" world, the rule of law could have significant economic

effects. If the rule of law increases predictability, it could lead to more investment, both in human capital and in the physical stock, both of which are expected to lead to higher growth. Predictability can also be expected to increase the number of transactions, which should make actors better off. Estimating the growth effects of the various dimensions of the rule of law is a clear and useful next step that will provide insight into the conditions necessary for growth. The estimates can also be used to investigate possible interdependencies between the various rule of law dimensions. Our theoretical prior is that most of the dimensions are not substitutable for each other, but instead act as complements to each other.

Finally, given that various aspects of the rule of law are significantly correlated with a number of economic variables, it would be interesting to discover the determinants of the rule of law. We already know that the correlation between the various aspects is low, implying that different countries are strong in different aspects of the concept. To identify the reasons behind this diversity promises to be an exciting intellectual endeavor.

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Appendix 1: List of Variables

Variable	***Description***	***Source***
BHR	Basic human rights; an average over five criteria (state of emergency or martial law, political killings, disappearances, torture, and political prisoners). Average reflects practice between 1990 and 1997.	Cingranelli and Richards (2004)
CIVLIBTIES	Civil liberties; measured on a scale from 1 to 7 with 1 reflecting the highest degree of civil liberties.	Freedom House (2005)
COMMON	Dummy variable coded 1 if the country belongs to the common law legal family, 0 otherwise.	La Porta et al. (2004)
CR	Constitutional review; normalized sum of (i) the judiciary review index and (ii) the rigidity of the constitution index.	La Porta et al. (2004)
CORRUPTION	The corruption perceptions index is computed on the basis of annual surveys; ranges from 1 to 10, with higher values indicating lower levels of perceived corruption.	Transparency International (2005)
DEMOCRACY	The variable "polity2" from the Polity IV project in which countries are ranked between –10 (perfect autocracy) and 10 (perfect democracy).	Marshall and Jaggers (2004)
FAIR	The index of fair trial is computed covering 10 dimensions (e.g., right to appeal, public trial, timeliness, presumption of innocence, right to an interpreter, etc.) based on Human Rights Reports of the U.S. State Department; values between 0 and 1; 1 indicating frequent problems.	Hathaway (2002)
JI	Index of 9 variables measuring *de facto* judicial independence on a scale from 0 to 1, with 1 indicating a very high level of JI.	Feld and Voigt (2003)
JA	Judicial accountability; answers to the question "In your country, how commonly would you estimate that firms make undocumented extra payments or bribes connected with getting favorable judicial decisions?" can be answered between "common" (coded 1) and "never occurs" (coded 7); question is part of the Global Competitiveness Report.	Cornelius et al. (2003)
JR	Judicial review; measures the extent to which judges (either Supreme Court or constitutional court) have the power to review the constitutionality of laws in a given country. The variable takes three values: 2—if there is full review of constitutionality of laws, 1—if there is limited review of constitutionality of laws, 0—if there is no review of constitutionality of laws.	La Porta et al. (2004)
LAWORDER	Variable consisting of two components. The law component assesses the strength and impartiality of the legal system, while the order component assesses the degree to which the law is observed by the population.	Political Risk Services (+++)
PREDICT	Answers to the question "In general, government officials' interpretations of regulations affecting my establishment are consistent and predictable." To what extent do you agree with this statement? Do you 1. Fully disagree … 6. Fully agree). Source: Investment Climate Survey.	Worldbank (2009)
PI	Index of 6 variables measuring *de facto* judicial independence on a scale from 0 to 1, with 1 indicating a very high level of prosecutorial independence.	Aaken et al. (2008)

ROL	Rule of law; Source: Worldwide Governance Indicators.	Kaufmann et al. (2003)
SOP	Separation of powers; number of actual veto players. Average value for the years from 1993 to 1997.	Beck et al. (2001)