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# DOES COMPLIANCE CORRELATE WITH POLITICAL SUPPORT?

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## ABSTRACT

The literature on state legitimacy posits a close relationship between attitudinal political support and compliant behavior. The relationship is well theorized, but an examination of the empirical evidence suggests a significant lacuna. In the literature that focuses citizens' attitudinal political support, the relationship has been tested through the use of proxies for behavior. In the literature that focuses states' actions to coax compliance out of citizens, the relationship is derived from behavior. To begin fill this gap in the research, the paper estimates country-level correlations between standard measures of attitudinal political support and a compliant behavior index generated by us. Using data from comparative survey studies (attitudinal support) and official records (compliant behavior), we find a strong and consistent correlation between the two key variables.

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This paper addresses the empirical relationship between citizens' political support attitudes and compliant behavior towards the state. Comparing across countries, are variations in political support as observed in survey research associated with variations in quantifiable behavior indicating compliance with official laws, rules and regulations?

Support and compliance are key variables in many research agendas on state legitimacy. In this research, a state is legitimate to the extent its citizens voluntarily comply with laws and government dictates. While the precise causal mechanisms are contested, it is generally agreed that, when acquired, citizen political support "bolsters willing obedience" (Levi, Sacks and Tyler 2009:355).<sup>1</sup> The analysis that follows focuses on two literatures that each makes this argument – political support research, and research on state resource mobilization. The former literature centers on citizens' attitudes towards their political system and offers a framework for how to analyze support attitudes (Easton 1965; Norris 1999a; Dalton 2004). The latter literature is focused on how states coax compliance out of citizens and helps to identify the types of compliant behavior that determine the capacity for effective, authoritative decision making (Levi 1988; 1997; Tilly 1992; Migdal 2004; Hui 2005).

Although the 'support leads to compliance-argument' is theoretically well grounded, there is surprisingly little empirics that directly document the relationship. In survey-based political support research, efforts to connect individuals' supportive attitudes to behavior have relied on various proxies for behavior (e.g. Klingemann 1999; Norris 1999c; Dalton 2004:165-169; Levi and Sacks 2009; Marien and Hooghe 2011). In the largely historical research on state resource mobilization, political support attitudes are typically inferred from behavior (e.g. Tilly 1992; Hui 2005). In essence, political support research captures attitudes but not compliant behavior, whereas state resource mobilization research captures compliant behavior but not support attitudes. This is the lacuna addressed in the paper.

Our goal is not to measure legitimacy directly but rather to test a relationship that plays a critical role in research on state legitimacy. In particular, our analysis brings new evidence to the long-standing debate on the importance of changes in citizen support for regime stability (Miller 1974a;

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<sup>1</sup> While scholars have somewhat varying definitions of legitimacy, they agree it is a mindset that is intimately connected to behavior. See for example Easton (1975:451); Migdal (2004:52); Gilley (2006:500); Tyler (2006); Levi, Sacks, and Tyler (2009:313).

1974b; Citrin 1974; Norris 1999a; Dalton 2004; Marien and Hooghe 2011). Is there reason to believe that variations in attitudinal political support are related to compliant behavior towards the state?

By estimating the aggregate, country-level, correlation between attitudinal political support and compliant behavior, we concede to the obstacles of micro-level analysis in the field. However, the aggregate-level analysis is not merely a substitute for individual-level analysis. It is also complementary. Corresponding to the way in which widespread social trust benefits the whole of a society (e.g. Beugelsdijk, de Groot, and Schaik 2004; Delhey and Newton 2005; Uslaner and Rothstein 2005), the processes that generate the theorized relationship are likely present also at the aggregate, contextual, level. The underlying logic is that citizens in high (low) support countries are generally disposed towards (against) voluntarily compliance with state laws and regulations.

Below we first revisit political support research and state resource mobilization research for theoretical anchorage. The next section presents our research design, data and measurements. A combination of comparative survey data (primarily World Value Survey and European Value Survey) are used for the attitudinal variables, while the behavioral variables are drawn from a number of sources. The following section presents empirical results. Substantiating both the ‘support leads to compliance argument’ and the validity of political support measurements, we find a strong and consistent correlation between different measures of support attitudes and compliant behavior from a large number of countries throughout the world. A final section concludes.

## Attitudinal political support research

In the literature theorizing political support, David Easton’s concept ‘diffuse support’ relates directly to state legitimacy theory.<sup>2</sup> Diffuse support is defined as an “attachment to a political object for its own sake” that “taps deep political sentiments and is not easily depleted through disappointment with outputs” (Easton 1965:274). It is “a reservoir of favorable attitudes or good will that helps members to accept or tolerate outputs to which they are opposed” (Easton 1965:273). A political system that loses its diffuse support must “revive the flagging support or its days will be numbered”

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<sup>2</sup> Political support refers to the “attitude by which a person orients himself to an object either favorably or unfavorably, positively or negatively” (Easton 1975:436).

(Easton 1965:124). This description of the concept and its consequences is close to a common understanding of legitimacy as the right to rule. Thus, if only diffuse support could be accurately measured, it would be the analytical construct that captures the difficult to observe legitimacy belief. Unfortunately, and undermining such hopes, scholarly attempts to directly measure the concept have been unsuccessful (e.g. Loewenberg 1971; Anderson 2002).

However, another of Easton's ideas has proven more useful for empirical research – that support attitudes are directed towards different political objects ranging from specific “political authorities” to the more abstract “regime” and “political community”. According to theory, the implication of eroded (or growing) attitudinal support varies with object (Easton 1975:437). Low levels of support for incumbent politicians will lead to their replacement through election, whereas citizens' attitudes towards the fundamental objects at the system level will affect their willingness to comply with regime institutions or even state dictates, which would threaten the long-term stability of political systems. For the current examination, thus, the measurements of interest are those that capture citizens' system-level sentiments (Klingemann and Fuchs 1995:2-5; Dalton 2004:157-59; Marien and Hooghe 2011).<sup>3</sup>

It is not clear precisely how to conceptualize system-level objects. Research subsequent to Easton's work has introduced a finer grained categorization than the original tripartite model of authority; regime; and community (Norris 1999a; Klingemann 1999; Dalton 2004). Considering insights from political support and state resource mobilization research, we suggest that a distinction between “government”, “regime” and “state” is analytically useful. Government (or incumbent government) corresponds to how Easton's ‘political authorities’ is used in recent literature (e.g. Dalton 2004:6-7). It is the least permanent feature of a political system and in democracies changes as a matter of course (Fishman 1990:428). Regime describes the system by which decisions are made by government (Easton 1957: 392; Fishman 1990: 428). State indicates the entity which holds a monopoly on the legitimate use of physical force in an area (Gerth and Mills 1946: 78; Tilly 1992: 1).<sup>4</sup>

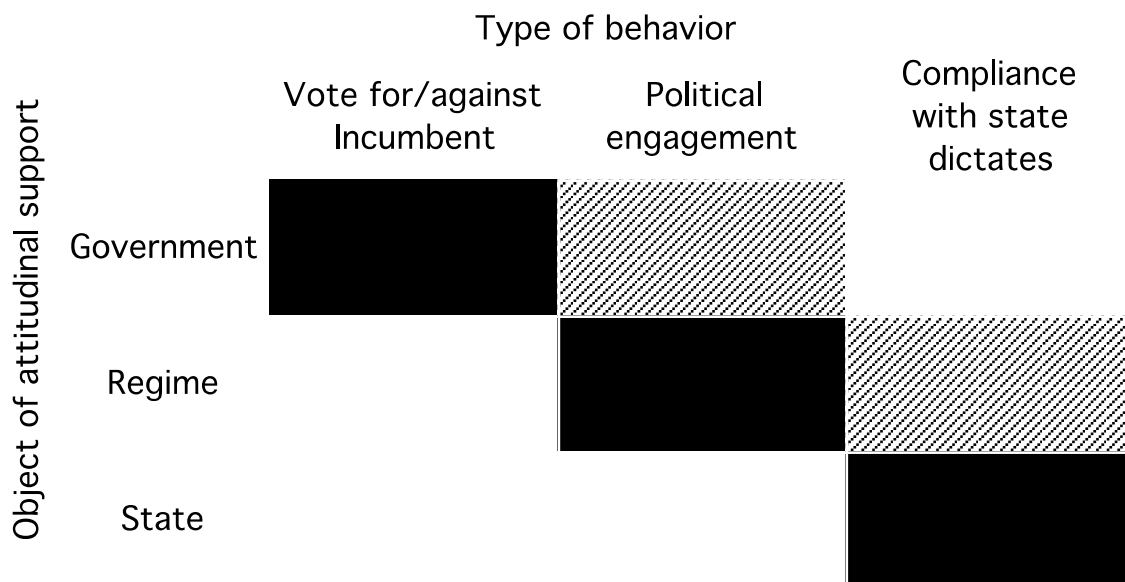
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<sup>3</sup> When analyzed from the perspective of political trust, studies by Hetherington (2006), Randolph and Chandler (2006), and Tyler and Huo (2002) demonstrate that the standard survey indicators in political support research are relevant for our understanding of other political phenomenon than regime stability. Levi and Stoker (2000) review the political trust literature from this perspective.

<sup>4</sup> For a discussion of the relationship between the state and Easton's political community, see supplementary information.

Both regime and state are objects of support at the system-level. To see why the distinction between regime and state is analytically useful, consider that regimes might be replaced without adverse effect on law abidance. As illustrated by the changes within the former Soviet dominions in Eastern Europe, regimes may be overturned without a complete breakdown of social order, whereas failed states, such as Afghanistan or Somalia, are associated with massive violent and unlawful behavior (Lawson 1993; Rotberg 2009:2-3). Following this reasoning, we expect that measurements of citizens' support of state functions will correlate the strongest with compliant behavior (see figure 1 for a graphical illustration).

*FIGURE 1: HOW BEHAVIORAL COMPLIANCE IS EXPECTED TO VARY WITH OBJECT OF ATTITUDINAL SUPPORT*



Note: Lighter colors indicate a weaker relationship between support and compliance

### The relationship at the individual level

The impetus for the current study is the widespread use of proxies for behavior in previous research on the support-compliance relationship at the individual level. To substantiate this claim we briefly review the evidence offered by central work in the field.

A paper by Song and Yarbrough (1978) is referenced as evidence that trust increases tax compliance by, for example, Dalton (2004:158). However, the paper examines the relationship between trust and tax ethics, which is distinct from behavioral compliance. The only measure of actual behavior that is presented in the study is highly indirect as respondents are asked to estimate the tax compliance of citizens in general.

Other papers examine the relationship between political support and attitudes towards behavior (see Norris 1999c:264-270; Dalton 2004:157-190; Marien and Hooghe 2011). This research shows a link between political support and a “willingness to obey the law voluntarily”. However, absent evidence of behavioral compliance based on this willingness it seems premature to conclude that “the legitimacy of regime institutions is one contributing factor which helps promote voluntary compliance with the law” (Norris 1999c:264).

Similarly, Levi and Sacks (2009) confirms a link between acceptances of the tax department’s right to make people pay taxes and attitudes towards government. The results support the posited importance of perceptions of government for what the authors called value-based legitimacy. Value-based legitimacy is however only one part of a larger model in which the authors posit that value-based legitimacy leads to behavior-based legitimacy. Absent behavioral data, the link between value-based and behavioral legitimacy is open to question.

Finally, work by Scholz and Lubell (1998) is frequently cited in support of a relationship between political support and tax compliance specifically (see Dalton 2004:158; Levi and Sacks 2009:315; Tyler 2011:140; Marien and Hooghe 2011:271). However, tax compliance is not directly measured but rather self-reported. Efforts are made to correlate survey responses with estimates of tax compliance from the IRS for the high-income counties in the study, but authors acknowledge that they do not measure compliance directly (Scholz and Lubell 1998:402).

### **The relationship in the aggregate – pro and con**

Putting the issue about individual-level relationships aside, is there reason to believe that measurements of political support attitudes are indicative of citizens’ behavioral compliance in the aggregate and thereby informative about the long-term stability of democratic states?

The debate over the validity of support measurements in this domain started more than four decades ago. The first to make the connection between eroding political support and democratic stability with regard to Western democracies was Arthur Miller in the early 1970s (Miller 1974a).<sup>5</sup> He argued that a precipitous decline in political trust registered in the US election studies meant that without policy changes citizens' trust of the government "would continue to decline, increasing the difficulty for leaders to make binding political decisions, as well as raising the probability of the occurrence of radical political change" (Miller 1974a: 971). A year after Miller's article, Crozier, Huntington and Watanuki (1975) raised similar concerns for developed countries in the general.

Three decades later, after weighing evidence from a large number of empirical studies, Dalton (2004:208) remains conditionally worried for democratic system stability in the wake of eroding supportive attitudes. Along a similar line of reasoning, Montero and Torcal (2006) sees long-term erosion of political support as a sign of disenchantment to which there is no easy solution. Recently Marien and Hooghe (2011:283) conclude from an analysis of attitudes towards intended behavior that "distrust actually makes it more difficult for government institutions to function in an effective manner."

Others, however, have taken more sanguine positions. Jack Citrin, Miller's interlocutor in the now classic debate, noted that the decline in political trust was directed towards political incumbents, i.e. governments, rather than the fundamentals of the political system. In a follow-up study to the Crozier and colleagues-volume, Pharr and Putnam (2000) noted, with the benefit of 25 years hindsight, that the original study had been far too alarmist. Dogan (2005: 4) attests to a loss of public confidence but not of legitimacy: "(A) pluralist democracy can become accustomed to a lack of confidence in institutions...it can continue to live as to some people suffering, from a chronic illness." Still others maintain that a deepening distrust towards politicians and regime institutions have not undermined the support for regime principles and the fundamental political community (e.g. Norris 1999a).

Beyond the construct validity of survey indicators there are other reasons for why attitudes and compliance might be unrelated. On a system level it is at least in theory possible for compliance to

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<sup>5</sup> Before that the idea of a relationship between attitudinal support and system stability was central for Almond and Verba's classic "The Civic Culture" (1963). When introduced, their argument was generally accepted, perhaps because at the time US and British citizens were highly approval of their own political system.



be “a practical response by individuals to an array of rewards and sanctions” (Migdal 2004:52), as opposed to support. Large-scale coercion would undoubtedly be expensive but for shorter periods of time it is not unfeasible, and there are many historical examples where initial coercion slowly transformed into apparent attitudinal support.

Conversely, a lack of compliance with laws need not indicate disapproval of them. For example, conceived of as a collective action problem of the second order, illegal acts such as corruption do not necessarily constitute a moral endorsement of such behavior (Persson, Rothstein, and Teorell 2010:11). Second order collective action problems could lock societies into behavior that is incongruent with attitudes and mores.

Finally, compliance might be possibly habitual, and a function of conformity rather than political support (Levi 1997: 17-18; cf. Weber 1968). Whereas coercion or a collective action problem of the second order means that attitudes and behavior is disjointed, habitual compliance is independent of attitudes: citizens comply because they did.

In sum, prior research is inconclusive about the aggregate support-compliance relationship.

## **Behavioral Compliance**

The concept of compliance plays a large role in the literature on state resource mobilization. This literature draws heavily on Weber’s work on economy and society (Weber 1968; Gerth and Mills 1946: 77-128). In this tradition compliance is a measure of the state’s domination: “[A]t the most elementary level, the strength of the state rests on the degree to which the population conforms with its demands ... often compelled by the most basic of sanctions, force” (Migdal 2004:52; Weber 1968: 212; cf. Gerth and Mills 1946: 77-81).

While a research agenda derived from the Weberian conception of the state might initially seem foreign to research on democracy, the two are complementary. Even democracies depend on a state able to coax compliance from citizens (Wang 2003; Fukuyama 2005; Cf. Diamond 2000; Carothers 2002). Indeed, the impetus behind many studies of political support comes from a concern that eroding political support is “increasing the difficulty for leaders to make binding political decisions, as well as raising the probability of the occurrence of radical political change” (Miller

1974a:971). In other words, the concern has been that citizen increasingly will not comply with state dictates.

Underlying the state's ability to make binding decisions is an interlocking system of revenue collection, administration, and a monopoly on physical force (cf. Gerth and Mills 1946: 79-80). Along these lines, Charles Tilly argued that the modern national state is the sum of the activities – such as extraction, adjudication, and protection – that rulers gradually took on in their efforts to mobilize resources (Tilly 1992:96-99; cf. Tilly 1975; 1985). Victoria Tin-bor Hui argues that the same general pattern, that to mobilize resources rulers expanded the scope and the power of the state, holds true in Qin China as well as early modern Europe (Hui 2005). From a less structural theoretical perspective, Margaret Levi argues that the “history of state revenue production is the history of the evolution of the state” (Levi 1988:1).

Paralleling the argument in political support theory that support leads to compliance, the literature on state mobilization of resources emphasizes the importance of public consent. While plunder has historically been a popular way to finance the activities of rulers, voluntary or quasi-voluntary compliance appears far more effective (Tilly 1985; Levi 1988; cf. Levi and Sacks 2009:313). Tilly and Hui argue that the states most able to mobilize resources in early modern Europe and Qin China were those that engaged in a bargain where political or economic rights were given subject in return for voluntary compliance (Tilly 1992:102; Hui 2005:171).<sup>6</sup> Similarly, Levi's work develops the role of consent in compliance with state efforts to mobilize resources (Levi 1981; 1988; 1997). As noted in the introduction, in this literature support is inferred from the behavioral compliance.

Drawing from the literature on state resource mobilization, we identify three types of compliant behavior towards the state that are of particular importance for system maintenance. Given that the development of the modern state is largely the development of monopolized coercion, nationalized taxation, and bureaucratized administration (Hui 2005:230), the critical types of behavior are those that support these very functions. This means *law abidance*, *tax compliance*, and *non-corrupt behavior*.

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<sup>6</sup> Tilly's largely quantitative study seems to be supported by quantitative studies, cf. Karaman and Pamuk (2013).

The first key behavior is observance of the state's monopoly on force or violence.<sup>7</sup> A state or regime survives only to the extent that its laws and rules can be enforced. Compliance, especially as it relates to the stability of the political system, begins with behavioral acceptance of the state's monopoly on violence. From the perspective of individual citizens this is manifested in willingness to follow laws in general, and abide by the state's monopoly on violence in particular.

The second key behavior to examine is the level of compliance with efforts to mobilize resources; the "major limitation on rule is revenue" (Levi 1988:1). Though scholars approach this mobilization somewhat differently, the basic understanding of the centrality of resource mobilization is shared (Tilly 1992; Levi 1988; 1997; Hui 2005). From the perspective of individual citizens this is manifested in willingness to pay the taxes that government demand.

The third key behavior is compliance with the rules and regulations of the administrative apparatus, the inverse of which is corruption. It is difficult to overstate the importance of the administration to the development and functioning of a state (Vu 2010; Hui 2005; Weber 1968). The state is wholly dependent upon its agents, and by extension their willingness to impartially follow rules and regulations (cf. McAdam, Tarrow and Tilly 2001:78). Failure on the part of employees to do so directly affects the state's ability to maintain itself and/or the regime (cf. Wang 2003: 38). Corruption has a disastrous effect on the ability of states to provide the most basic services (Rothstein 2011:58-76). From the perspective of individuals this behavior requires a willingness on the one hand for those employed by the state to not use entrusted power for private gain, and on the other for citizens to accept the rules and regulations of the bureaucracy and not try to circumvent them.

For the purpose of this study, we consider the three types of behavior as endogenously related. These three intimately related behaviors provide the basis for the ability of political leaders to make binding political decisions. Therefore, together law abidance, tax compliance, and non-corrupt behavior constitute our measure of behavioral compliance.

Corruption is sometimes treated as an exogenous factor, affecting a broad array of phenomenon, including law abidance and tax compliance. However, in what follows we do not assume one-directional causality. Rather, we consider the three types as interrelated. Exemplifying this, effective

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<sup>7</sup> Illustrative of this point is Pompey's retort, according to Plutarch, to the Mamertines in Messana who objected to his actions after he had captured the city: "Cease quoting laws to us that have swords girt about us!"

taxation, upon which the power of the state arguably rests (Wang and Hu 2001: 27) is possible only when a state is able to register all potential tax-payers, gather information on all economic activity, and detect and credibly deter non-compliance (Wang 2001:233-234). All of these activities are impossible or undermined if the agents of the state are corrupt (Wang 2001:235-237). The pervasive and uncorrupt administration required to effectively mobilize resources is however expensive and hard to fund without effective taxation (cf. Fukuyama 2011:470). Compliance with laws in general, tax laws in particular, and uncorrupt administration are interrelated phenomena, and determining their relationship is outside the scope of this study. For the present purpose it is enough that these three kinds of compliance are all relevant for the ability of government to make binding decisions.

## **Design, data sources and indicators**

The study design is cross-sectional. Although desirable, the inclusion of a systematic time component would have severely limited the number of available cases. The relationship between attitudinal political support and compliant behavior is universal and not restricted to modern democracies (e.g. Hui 2005). We have therefore strived to cover a wide array of countries. To see if there is a regime bias, we estimate separate results for OECD countries.<sup>8</sup>

We focus throughout on a limited number of variables. With regard to attitudinal political support, we rely on three indicators that are commonly used in the literature: institutional trust; law abiding attitudes; and satisfaction with democracy. Moreover, within institutional trust we differ between input-institutions (the government and the parliament) and output-institutions (the police and the civil service). For measurement of citizens' behavior towards the state, we have constructed two versions of a compliance index. Finally, we use a variable for social trust to generate a baseline comparison. Since it is generally accepted that high levels of social trust is conducive for well-functioning societies (e.g. Beugelsdijk, de Groot, and Schaik 2004; Delhey and Newton 2005; Uslaner and Rothstein 2005), a comparison between support-compliance and social trust-compliance correlations suggests a standard for substantial significance in this context.

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<sup>8</sup> With the exception of Turkey and Mexico, the 34 OECD members are consolidated democracies and highly developed (as measured by the UN's Development Index). The average Freedom House/Imputed Polity score for the world is 6.67, whereas for the OECD countries it is 9.76; Turkey and Mexico's scores are 7.58 and 8.25 respectively.

The attitudinal data are taken from the World Value and European Value Studies (WVS and EVS respectively), the European Social Survey (ESS), and the Comparative Study of Electoral Systems (CSES). The compliance measure draws on information from the World Bank, the UN, and from research on the size of shadow economies. Using these data sources, we have generated a sample of 78 countries for which we have information on compliant behavior and at least one measure of attitudinal support (table 1)

TABLE 1: COUNTRY SELECTION AND AVAILABLE INDICATORS

Countries and Indicators					
Country	Number/Type Of indicator	Country	Number/Type Of indicator	Country	Number/Type Of indicator
<b>OECD (and World)</b>		Slovakia	5 (I; II; III; IV <sup>c</sup> ; V)	India	4 (I; II; III; V)
Australia	5 (I; II; III; IVa; V)	Slovenia	5 (I; II; III; IV <sup>c</sup> ; V)	Indonesia	4 (I; II; III; V)
Austria	5 (I; II; III; IVc; V)	Spain	5 (I; II; III; IV <sup>c</sup> ; V)	Iran	4 (I; II; III; V)
Belgium	5 (I; II; III; IVb; V)	Sweden	5 (I; II; III; IV <sup>c</sup> ; V)	Jordan	4 (I; II; III; V)
Canada	5 (I; II; III; IVa; V)	Switzerland	5 (I; II; III; IV <sup>c</sup> ; V)	Latvia	5 (I; II; III; IV <sup>c</sup> ; V)
Chile	4 (I; II; III; V)	Turkey	5 (I; II; III; IV <sup>c</sup> ; V)	Lithuania	5 (I; II; III; IV <sup>b</sup> ; V)
Czech Rep.	5 (I; II; III; IVc; V)	UK	5 (I; II; III; IV <sup>b</sup> ; V)	Macedonia	4 (I; II; III; V)
Denmark	5 (I; II; III; IV <sup>c</sup> ; V)	US	5 (I; II; III; IV <sup>a</sup> ; V)	Malaysia	4 (I; II; III; V)
Estonia	5 (I; II; III; IV <sup>c</sup> ; V)	<b>World</b>		Mali	4 (I; II; III; V)
Finland	5 (I; II; III; IV <sup>c</sup> ; V)	Albania	4 (I; II; III; V)	Malta	4 (I; II; III; V)
France	5 (I; II; III; IV <sup>c</sup> ; V)	Azerbaijan	4 (I; II; III; V)	Moldova	4 (I; II; III; V)
Germany	5 (I; II; III; IV <sup>c</sup> ; V)	Argentina	4 (I; II; III; V)	Montenegro	4 (I; II; III; IVa; V)
Greece	5 (I; II; III; IV <sup>c</sup> ; V)	Armenia	4 (I; II; III; V)	Morocco	4 (I; II; III; V)
Hungary	5 (I; II; III; IV <sup>b</sup> ; V)	Brazil	4 (I; II; III; IVa; V)	Mozambique	4 (I; II; III; V)
Iceland	5 (I; II; III; IV <sup>a</sup> ; V)	Bulgaria	5 (I; II; III; IVc; V)	Peru	4 (I; II; IVa; V)
Ireland	5 (I; II; III; IV <sup>c</sup> ; V)	Belarus	5 (I; II; III; IVa; V)	Philippines	2 (I; IVa)
Israel	2 (I; IV <sup>c</sup> )	Burkina Faso	4 (I; II; III; V)	Romania	5 (I; II; III; IV <sup>c</sup> ; V)
Italy	4 (I; II; III; V)	China	4 (I; II; III; V)	Russia	5 (I; II; III; IV <sup>c</sup> ; V)
Japan	5 (I; II; III; IV <sup>a</sup> ; V)	Taiwan	5 (I; II; III; IVa; V)	Serbia	4 (I; II; III; V)
South Korea	5 (I; II; III; IV <sup>a</sup> ; V)	Colombia	3 (I; II; V)	Vietnam	4 (I; II; III; V)
Luxembourg	4 (I; II; III; V)	Croatia	5 (I; II; III; IVc; V)	South Africa	5 (I; II; III; IV <sup>c</sup> ; V)
Mexico	5 (I; II; III; IV <sup>a</sup> ; V)	Cyprus	5 (I; II; III; IVc; V)	Thailand	5 (I; II; III; IV <sup>a</sup> ; V)
Netherlands	2 (I; IV <sup>c</sup> )	Egypt	3 (I; II; III; V)	Trin and Tob	4 (I; II; III; V)
New Zealand	5 (I; II; III; IV <sup>a</sup> ; V)	Ethiopia	4 (I; II; III; V)	Ukraine	5 (I; II; III; IV <sup>c</sup> ; V)
Norway	5 (I; II; III; IV <sup>c</sup> ; V)	Georgia	4 (I; II; III; V)	Uruguay	5 (I; II; III; IV <sup>a</sup> ; V)
Poland	5 (I; II; III; IV <sup>c</sup> ; V)	Ghana	3 (I; II; V)	Zambia	4 (I; II; III; V)
Portugal	5 (I; II; III; IV <sup>c</sup> ; V)	Guatemala	4 (I; II; III; V)		

Note: I = Compliant behavior; II = Institutional Trust; III = Attitudinal Law Abiding; IV = Satisfaction With Democracy (superscript a=CSES data; superscript b=ESS data; superscript c= both); V = Social Trust

## Data Sources

The attitudinal data derives mainly from the period 2005-2010. With one exception, the behavioral data is from the latter half of that time period. Since we primarily study correlations and not causation, the precise time order between variables is not critical.

To maximize country coverage on institutional trust, law abidance, and social trust, we combined data from WVS wave 5 (2005-2010) and EVS round 4 (2008), using the procedure recommended

by the survey organizations.<sup>9</sup> When both surveys provided information for a country, observations were averaged.<sup>10</sup> Correspondingly, information about citizens' satisfaction with democracy (SWD) is from both CSES module 3 (2006-2011) and ESS wave 3 (2008). Overlapping cases were averaged. Table 2 provides descriptive statistics for all relevant variables.

TABLE 2: DESCRIPTIVE STATISTICS OF ALL VARIABLES IN THE ANALYSIS (IN GREY) AND CONSTITUENT INDICATORS.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Deviation
Trust in Input Institutions (Government & Parliament)	75	0.24	0.93	0.4351	.12457
Trust in Output Institutions (Police & Civil Service)	75	0.25	0.82	0.5099	.10338
Overall Institutional Trust (Input & Output)	75	0.25	0.88	0.4755	.10751
EWVS Confidence: The Government	77	1.22	3.23	2.6588	.38085
EWVS Confidence: Parliament	76	1.23	3.38	2.7247	.39877
EWVS Confidence: The Police	77	1.46	3.13	2.3538	.35470
EWVS Confidence: The Civil Services	78	1.63	3.38	2.5990	.29874
Law Abiding Attitudes Index	75	0.71	0.96	0.8682	.05715
EWVS Justifiable: avoiding a fare on public transport	76	1.37	4.58	2.6345	.67040
EWVS Justifiable: cheating on taxes	77	1.00	3.66	2.2649	.56537
EWVS Justifiable: someone accepting a bribe	78	1.12	3.38	1.8437	.51751
Satisfaction with Democracy Index	47	0.24	0.74	0.5050	.12134
CSES Satisfaction with Democracy	39	1.78	3.04	2.4231	.34240
ESS Satisfaction with Democracy	31	2.42	7.36	4.8264	1.29527
Compliant Behavior Index	160	0.12	0.99	0.4538	.19968
Limited Compliant Behavior Index	160	0.09	1.00	0.5006	.21629
Log of Homicide Rate (UNODC 2010)	190	0.00	1.00	0.6817	.15867
Shadow Economy 1999-2007	160	8.50	66.10	33.2469	12.68703
Control of Corruption - Estimate	191	-1.73	2.48	-0.0648	1.00182
Most People Can Be Trusted	79	0.04	0.76	0.2816	.16278
EVWS Most People Can Be Trusted	79	1.24	1.96	1.7184	.16278
Valid N (listwise for all variables in the analysis)	43				
Valid N (listwise)	21				

<sup>9</sup> See <http://www.wvsevsdb.com/wvs/WVSIntegratedEVSWS.jsp?Idioma=I>. This data includes WVS data for New Zealand and Guatemala from 2004 as they are considered part of wave 5.

<sup>10</sup> For the relevant variables the correlation between overlapping countries in the 2005-2010 EVWS and WVS wave 5 was between  $r=.972$  and  $r=.987$ . In WVS wave 5 Serbia scored unusually low on law abiding attitudes (how justifiable it is to cheat on taxes and to take a bribe). Rather than relying on information that for no apparent reason deviate from prior and later surveys, we use the average for EVS wave 4 and the subsequent WVS wave 6.

## Indicators of Attitudinal Political Support

We focus on indicators that tap into individuals' system-level sentiments. Referring to the conceptualization of support objects in the previous section, we focus the study on indicators that relate to the regime and the state rather than to the incumbent government. In general, we expect to observe the strongest relationship for indicators that reflect support of the state and state functions.

Empirical research on citizens' support attitudes has employed a multitude of indicators, many of which have unclear connotations (e.g. the use of nationalist sentiment in Klingemann 1999). We rely here on a limited number of indicators that are commonly used in the political support literature that it is reasonably to believe tap into system-level sentiments. Figure 2 provides an overview of their likely object of support with a more thorough discussion following below.

**FIGURE 2: HOW INDICATORS OF ATTITUDINAL POLITICAL SUPPORT RELATES TO OBJECTS OF SUPPORT**

		Indicators of Attitudinal Political Support				
		Institutional Support			Law Abiding Attitudes	Satisfaction with Democracy
Object of Support		Input Institution	Output Institutions	Overall Institutions		
		Object of Support	Government	■		■
Regime	▨		▨	▨		■
State			■	■	■	■

### Institutional trust

The first attitudinal indicator reflects support for the fundamental institutions of a political system. A central distinction here is between input-side institutions, which are responsible for transforming the demands of citizens into policy decisions, and output-side institutions, which are responsible for the implementation of these policies. With the exception of elections, most interactions between citizen and the political system are between citizens and state functionaries in various output-



institutions (to exemplify: police maintains social order, social workers administer welfare programs, and the judges adjudicate between citizens). Referring to their importance in everyday-life, Rothstein (2009) suggests that institutions on the output-side of politics are more central for citizen support than input-side institutions. To account for this potential disparity in importance, support for the input institutions (government and parliament) and the output institutions (police and civil service) are estimated separately as well as together.

For operationalization we rely on EWVS survey questions on public confidence in the government, the parliament, the police, and the civil service.<sup>11</sup> The surveys register confidence on a scale from 1 to 4, with higher number indicating less confidence in the political institutions. To generate indices, non-valid or missing responses to the question were deleted, country averages were created, and each averaged indicator was transformed into a 0-1-scale. We then took the geometric mean of the transformed indicators to create the three indices of institutional trust. Taking a geometric as opposed to arithmetic mean reduces the substitutability of the indicators, and the UN uses it in the calculation of the human development index to limit the overall impact of high performance in one dimension.<sup>12</sup> Finally, the index was reversed so that higher values reflect higher levels of trust.<sup>13</sup> As can be seen from Table 3, the correlations between the four indicators are generally high, with the lowest values for government-police ( $r=.533$ ), and government-civil services ( $r=0.687$ ).

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<sup>11</sup> For a discussion of how the word 'government' in the EWVS should be interpreted, please see supplementary information.

<sup>12</sup> Using an arithmetic mean marginally affects the changes the strength of some relationships, but not the results or conclusion that can be drawn from the results.

<sup>13</sup> The geometric mean rather than arithmetic mean was used to reduce substitutability. This same procedure was used in the creation of all indices, except for the satisfaction with democracy where overlapping scores were arithmetic rather than geometric averages.

TABLE 3: CORRELATIONS BETWEEN CONSTITUTING ITEMS AND INSTITUTIONAL SUPPORT INDICES

	Overall Institutional Trust (Input & Output)	Trust in Input Organizations (Government & Parliament)	Trust in Output Institutions (Police & Civil Service)	EWVS Confidence: The Government	EWVS Confidence: Parliament	EWVS Confidence: The Civil Services	EWVS Confidence: The Police
Overall Institutional Trust (Input & Output)	1	.942**	.934**	-.863**	-.952**	-.891**	-.850**
Trust in Input Organizations (Government & Parliament)	.942**	1	.762**	-.965**	-.960**	-.781**	-.655**
Trust in Output Institutions (Police & Civil Service)	.934**	.762**	1	-.645**	-.823**	-.898**	-.949**
EWVS Confidence: The Government	-.863**	-.965**	-.645**	1	.854**	.687**	.533**
EWVS Confidence: Parliament	-.952**	-.960**	-.823**	.854**	1	.822**	.728**
EWVS Confidence: The Civil Services	-.891**	-.781**	-.898**	.687**	.822**	1	.716**
EWVS Confidence: The Police	-.850**	-.655**	-.949**	.533**	.728**	.716**	1

\*\* . Correlation is significant at the 0.01

b. Listwise N=75

## Law-Abiding Attitudes

The second attitudinal indicator is law abiding attitudes, reflecting general support for the laws of the polity. This indicator is created from EWVS survey questions on how justifiable certain types of norm-violations are: avoiding a fare on public transport, cheating on taxes, and accepting a bribe.<sup>14</sup> Since this indicator primarily taps into support of the state rather than the regime, and since it measures attitudes towards behavior, it is expected to correlate quite closely with behavioral compliance. Indeed, in individual-level political support research, these variables have been used as proxies for compliant behavior (see Norris 1999c; Dalton 2004; Marien and Hooghe 2011).

In the surveys, responses are registered on a scale from 1 to 10, with higher values indicating that unlawful behavior is more justifiable. Averaging across the three constituting indicators (using the geometric mean), an index of law-abiding attitudes was created in the same way as the institutional trust indices; once more the scaling was reversed so that high values represent support for lawful as opposed to unlawful behavior. As reported in Table 4, the three constituting indicators are highly internally correlated.

<sup>14</sup> A fourth kind of law-abiding behavior, how justifiable it is to falsely claim government benefits, was left out because the meaning of “government benefits” varies substantially depending on the type of welfare state system.

TABLE 4: CORRELATIONS BETWEEN CONSTITUENT ITEMS AND THE LAW ABIDING ATTITUDE INDEX

	Law Abiding Attitudes Index	EWVS Justifiable: someone accepting a bribe	EWVS Justifiable: cheating on taxes	EWVS Justifiable: avoiding a fare on public transport
Law Abiding Attitudes Index	1	-.915**	-.910**	-.846**
EWVS Justifiable: someone accepting a bribe	-.915**	1	.751**	.625**
EWVS Justifiable: cheating on taxes	-.910**	.751**	1	.718**
EWVS Justifiable: avoiding a fare on public transport	-.846**	.625**	.718**	1
	.000	.000	.000	.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=75

### Satisfaction with Democracy (SWD)

The precise meaning of the satisfaction with democracy indicator is unclear. However, a common understanding in the literature is that it taps into different objects of support including the incumbent government, but that it primarily represents an evaluation of overall regime performance (Klingemann 1999; Anderson 2002; Linde and Ekman 2003).

In the surveys, response alternatives varied between 0-10 (ESS) and 1-4 (CSES). Moreover, high values represent satisfaction in ESS (31 countries) and dissatisfaction in CSES (39 countries). When generating the attitudinal index, country averages were rescaled into 0-1 with high values indicating satisfaction. The resultant index is highly correlated with each constituting indicator (.989 for ESS and -.809 for CSES).<sup>15</sup>

<sup>15</sup> Unlike the other indices, where it was desirable to reduce the substitutability of one indicator for another, in the combined CSES-ESS index both constituent indicators measure the same phenomenon. Given that both indicators measured the same phenomenon, and a high correlation between the satisfaction levels of the countries for which there is CSES as well as ESS data ( $r=.809$ ,  $N=23$ ), the arithmetic average was used.

## Indicators of compliant behavior towards the state

To capture law abidance in general, and compliance with the state's monopoly on violence in particular, we use the homicide rate. The private use of deadly violence is a theoretically important indicator. It is supported empirically by historical studies (Tilly 1992; Spierenburg 2008) as well as by contemporary cross-sectional studies (Nivette and Eisner 2013). Moreover, while criminal behavior in general is difficult to measure across countries, homicide has the (statistical) benefit that the disappearance of an individual leaves a mark in a way that other forms of crime generally do not. Furthermore, murder is a crime, which most countries should have reasonably similar definitions of.<sup>16</sup>

The data on homicide rate is from the UN Office of Drugs and Crime for 2004-2010 as reported in the 2011 UNODC global study on homicide (UNODC 2011). The information is compiled from different sources, including both criminal justice and public health data, which should help to overcome the problem of under-reporting in some countries.<sup>17</sup> The measure is the natural log of homicides per 100,000 people.

Tax compliance is measured by the size of a country's shadow economy. The shadow economy is the economy that should be regulated, but because of private evasion is not, and therefore eludes tax-assessment (Schneider and Enste 2013:9-10). It excludes by definition financial transaction tax evasion, which might be hard to distinguish from legal tax avoidance, as well as the informal sector, which is often not taxed (Schneider and Enste 2013:12). Information about the shadow economy is gathered from Schneider, Buehn and Montenegro (2010), which uses the same methodology as Schneider and Enste 2013, but provides better coverage. The analysis uses the averages of the years 1999-2007.<sup>18</sup>

The indicator of the level of corruption is the Control of Corruption variable from the World Bank Global Indicators (CC). Among several alternative measures of corruption, the CC is possibly the

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<sup>16</sup> Robbery was also tested as a measurement of law-abiding behavior, but it seems to skew too heavily towards the countries where data on robbery is collected.

<sup>17</sup> For a detailed methodological discussion, see UNODC 2011.

<sup>18</sup> We use data reported by Schneider, Buehn and Montenegro (2010) because they cover more countries than Schneider and Enste (2013) (162 compared to 151).

one most commonly used. It is constructed from a number of different indicators of corruption, and as such offers the consensus view of corruption-levels in a given country (Kaufmann, Kray, and Zoido-Lobaton 1999; Kaufmann, Kray, and Mastruzzi 2009). The constituent indicators capture both high and petty corruption, and thus provide an indication of how pervasive the phenomenon is perceived to be. The original scale is from -2.5 to 2.5 and higher values indicate better performance.

When standardizing the constituent indicators we used the observed maximal and minimal values. Like the support attitude indices, the resulting compliance scale is from 0 to 1 with higher values representing better outcomes (fewer homicides, less tax evasion, and less corruption). Creating an index especially for OECD countries did not produce different results, so the same index is used in all analyses.

As shown in Table 5, the homicide rate correlates medium high with shadow economy and corruption. To ensure the robustness of findings, the full three-item compliance index is complemented with a limited two-item index encompassing shadow economy and corruption only. We also tested an index without corruption, which produced identically structured findings but with lower support-compliance correlations.

TABLE 5: CORRELATIONS BETWEEN CONSTITUTING INDICATORS AND COMPLIANT BEHAVIOR INDICES

	Compliant Behavior Index	Limited Compliant Behavior Index	Shadow Economy 1999-2007	Limited Compliant Behavior Index	Log of UNODC Homicide Rate
<b>Compliant Behavior Index</b>	1	.986**	.881**	-.910**	-.749**
		.000	.000	.000	0
<b>Limited Compliant Behavior Index</b>	.986**	1	.881**	-.936**	-.647**
	.000		.000	0	0
<b>World Bank Control of Corruption</b>	.881**	.881**	1	-.671**	-.583**
	.000	.000		0	0
<b>Shadow Economy 1999-2007</b>	-.910**	-.936**	-.671**	1	.598**
	.000	.000	.000		.000
<b>Log of UNODC Homicide Rate</b>	-.749**	-.647**	-.583**	.598**	1
	.000	.000	.000	.000	

\*\* . Correlation is significant at the 0.01

b. Listwise N=160

To test construct validity the two compliant behavior indices were correlated with the United Nations Human Development Index (HDI).<sup>19</sup> The logic for this is that high levels of behavioral compliance towards the state should be conducive for state provision of services that promote health, education and material welfare, the constituent dimensions of HDI. In support of our measures, the correlation between HDI and respective index is .743 (the full version) and .720 (the limited version) ( $p < .01$ ).

For a second validity test we turn to a measure aimed directly towards state legitimacy. By combining attitudinal and behavioral indicators, Bruce Gilley (2006) has constructed a frequently cited index of state legitimacy for 72 countries around the globe. Although our indices do not differentiate between voluntary and non-voluntary compliance, the overall level of compliance should reasonably correlate with the state legitimacy index. Providing further support to our measures, the correlation between Gilley's legitimacy index (weighted measures) and the two compliance indices is .685 and .656 respectively ( $N=71$ ;  $p < .01$ ).

## Social Trust

The measure of social trust is the question of whether most people can be trusted from the EWVS. To maintain uniformity with attitudinal support indices, the original order of response alternatives were reversed and then rescaled into a 0-1 scale with higher values indicating that more people can be trusted.

## Results

To account for case-selection effects, the support-compliance correlation was estimated using different configurations of countries (see Table 6). In column I and II the number of country cases is maximized for each attitudinal support indicator. Column III and IV uses list-wise exclusion of cases when all attitudinal support indicators are considered. Column V and VI use the same list-wise criterion but without the SWD indicator for which we have the fewest country observations.

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<sup>19</sup> HDI data is from the 2011 UN Human Development Report, and covers 2010, cf. UNDP 2010.

(Its exclusion increases the number of cases worldwide from 43 to 70.) Column VII through X repeats the analysis in columns III to VI but only for OECD countries.

TABLE 6: THE RELATIONSHIP BETWEEN COMPLIANT BEHAVIOR TOWARDS THE STATE, AND INDICATORS OF ATTITUDINAL POLITICAL SUPPORT

	World						OECD			
	Compliant Behavior Index	Limited Compliant Behavior Index	Compliant Behavior Index	Limited Compliant Behavior Index	Compliant Behavior Index	Limited Compliant Behavior Index	Compliant Behavior Index	Limited Compliant Behavior Index	Compliant Behavior Index	Limited Compliant Behavior Index
	I	II	III	IV	V	VI	VII	VIII	IX	X
Trust in Input Organizations (Government & Parliament)	.151 .203 N=73	.158 .182 N=73	.224 .148	.243 .116	.144 .233	.144 .235	.358 .056	.354 .059	.412* .019	.410* .020
Trust in Output Institutions (Police & Civil Service)	.538** .000 N=73	.525** .000 N=73	.684** .000	.692** .000	.523** .000	.502** .000	.570** .001	.578** .001	.570** .001	.565** .001
Overall Institutional Trust (Input & Output)	.362** .002 N=73	.360** .002 N=73	.512** .000	.528** .000	.350** .003	.340** .004	.513** .004	.517** .004	.538** .001	.535** .002
Law Abiding Attitudes Index	.406** .000 N=72	.378** .001 N=72	.601** .000	.593** .000	.424** .000	.399** .001	0.348 .064	0.317 .094	0.291 .107	0.249 .169
Satisfaction with Democracy Index	.544** .000 N=47	.545** .000 N=47	.579** .000	.589** .000			.750** .000	.760** .000		
Most People Can Be Trusted	.587** .000 N=75	.544** .000 N=75	.606** .000	.570** .000	.555** .000	.511** .000	.745** .000	.754** .000	.703** .000	.696** .000
			N=43		N=70		N=29		N=32	

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

First and foremost, results corroborate the theorized relationship between attitudinal political support and compliant behavior towards the state. We can observe a strong and statistically significant support-compliance correlation for most indicators in all country configurations and for both compliant behavior indices. When compared to social trust-compliance correlations – our reference point for substantial significance – support-compliance correlations are equally strong for most indicators using worldwide country configurations. Within OECD countries the social trust-compliance correlation is the strongest compared to two of the indicators, but only marginally so. Hence, in accordance with theoretical expectations, we find that citizen’s system-level sentiments are related to compliant behavior.

Turning to a more detailed account there is one indicator of attitudinal political support that performs less well – trust in input institutions. It correlates significantly with compliance only among OECD countries (column IX and X). This is in contrast to trust in output organizations, which

correlate strongly with behavioral compliance in all country configurations (columns I to X). Moreover, combining trust in input- and output-institutions in an overall institutional trust indicator does not generate stronger correlations. Substantially this means that citizens' attitudes towards parliament and government are inconsistently related to their propensity to follow state dictates, whereas their attitudes towards the police and the civil service are reliably informative about this type of behavior. Thus, results fall in line with the research that emphasizes the importance of output-side institutions for the functioning of states (see Rothstein 2009).

Furthermore, our expectations regarding object of support are only partially confirmed. In particular, law abiding attitudes function less well than expected given their closeness to state functions and its focus on attitudes towards behavior. Indeed, among OECD countries (column VII through X in table 7) the correlation between law-abiding attitudes and compliant behavior barely reaches statistical significance. Only when Turkey – arguably an outlier among OECD countries – is removed from the sample do the correlations strengthen and become statistically significant (from  $r = .291$ ,  $p = .107$  to  $r = .453$ ,  $p = .010$ ). This is far below the expected performance of an indicator which is frequently used as a proxy for compliant behavior.

Conversely, the satisfaction with democracy-indicator performs better than expected. It correlates strongly with both indices of compliance in all country configurations, and especially among OECD countries. Although frequently used in empirical analyses, the SWD-indicator has been criticized for lack of a clear connotation (Canache, Mondak and Seligson 2001). In this context however, it stands out as a useful indicator of citizens' system-level sentiments. Drawing out implications of this finding, and given that SWD primarily measures evaluations of regime performance (Klingemann 1999; Anderson 2002; Linde and Ekman 2003), this testifies further to the importance of outputs for citizens' orientation towards their political system.

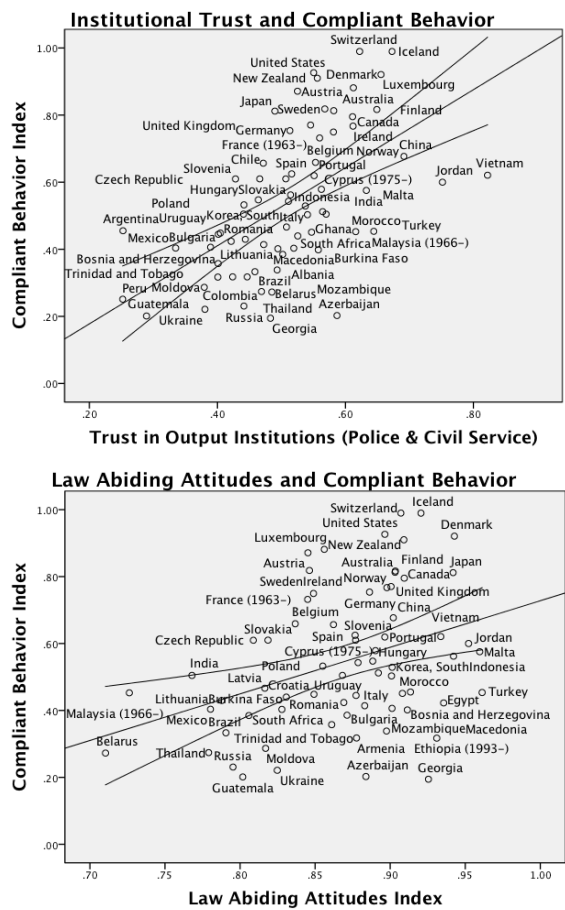
Addressing finally the issue of regime bias and sensitivity to case selection, it is clear that to a degree indicators function differently depending on the precise configuration of countries. In particular, law abiding attitudes perform inconsistently when comparing across the various universes of cases. Overall, however, trust in output-institutions and satisfaction with democracy stands out as reliable indicators of citizens' system-level sentiments world- wide and within OECD countries.

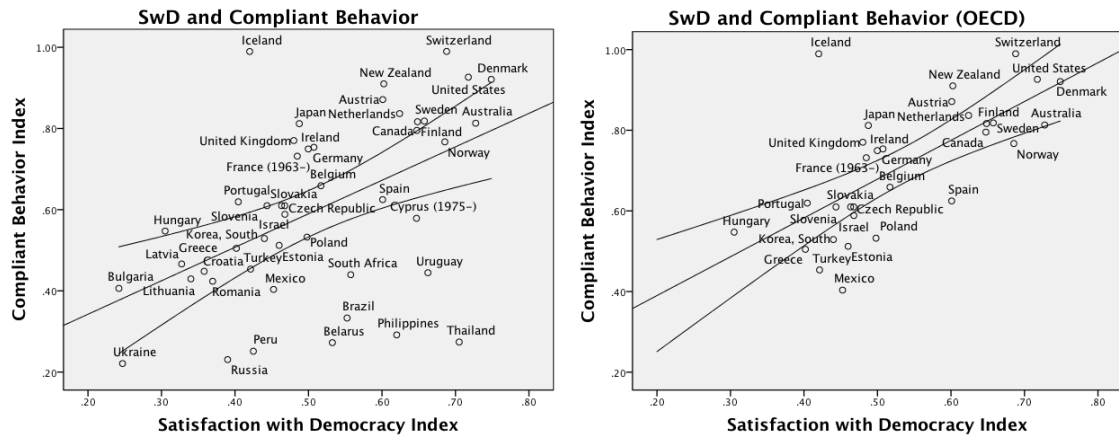


## A country by country examination

To further illustrate the support-compliance relationship, figure 3 and 4 plots the location of countries on the two axes along with the line of best fit and the associated confidence intervals for different attitudinal support-indicators. The top layer show trust in output-institutions (N= 73) and law abiding-attitudes (N= 72) when maximizing the number of countries for respective indicator. The bottom layer shows the SWD-indicator among countries worldwide (N= 47) as well as among OECD-countries (N= 31).

**FIGURE 3: THE RELATIONSHIP BETWEEN COMPLIANCE AND THREE INDICATORS OF POLITICAL TRUST**





Looking first at the output institution-indicator ( $r=.576$ ), outliers follow a clear pattern. All countries that register more compliance than expected for a given level of institutional trust are OECD members (plus Argentina). Countries that register less compliance than expected for a given level of institutional trust have a more tarnished reputation for quality of democratic government (among OECD-countries Turkey has the lowest institutional trust-compliance ratio). In fact, citizens of countries like Japan, Germany and United Kingdom are not more trusting of their output-institutions than citizens of Albania and Mozambique, but they are much more compliant towards the state.

Assuming causality in the relationship, this means that established democracies in OECD are less sensitive than other countries to declining trust in output-institutions, at least in the short run. Conversely, less economically advanced and less democratically established countries will likely benefit relatively little from a surge in trusting attitudes among citizens. Although the observed correlation coefficients are largely insensitive to country selection, it appears as if citizens' system-level sentiments interplay differently with compliant behavior in established democracies than in other countries.

Except for a weaker correlation ( $r=.406$ ), the pattern is similar for law abiding attitudes. The same group of OECD-countries registers higher than expected levels of compliant behavior given law abiding norms among citizens. Again it is less-well established democracies that get lower than average compliance from citizens' law abiding norms. In particular, a group of countries from the former Soviet Union Confederation (Russia; Ukraine; Moldova; Georgia; Azerbaijan) show unex-

pectedly low levels of compliance, perhaps indicating a collective action problem in which individually held norms about justifiable behavior does not readily translate into corresponding actions.

Since the reference to “democracy” is more meaningful in the context of established democracies, we show both a worldwide configuration of countries and OECD-countries when examining the SWD-indicator. Within OECD-countries we observe a strong correlation ( $r = .761$ ) which means that the ratio between SWD and compliant behavior is stable across countries.

However, Iceland is a deviant case. Between 2008 and 2011 Iceland experienced a deep financial crisis. The crisis was a blow to public confidence as unemployment tripled in the first month of the crisis. Reflecting this loss in confidence, satisfaction with democracy fell dramatically. In the decade leading up to the crisis the average level of dissatisfaction with how democracy work in Iceland was 26 percent, in the wake of the crisis this doubled to 54 percent.<sup>20</sup> Despite widespread dissatisfaction, Icelandic citizens remained remarkably compliant towards the state. This is potentially relevant for claims about causality in the support-compliance relationship.

According to political support theory, a regime that is held in disrepute by its citizens will eventually find it difficult to make binding decisions (Easton 1965: 124; Miller 1974b). Temporary crisis might not be a serious threat to regime survival, but within a period of time one of two factors should change: compliance should decline, or attitudinal support should return to pre-crisis levels.

Collecting additional information about the Icelandic case, we learn that the latter option applies. Some years after the height of the crisis, in connection to the 2013 parliamentary election, SWD among the Icelandic public had increased to a level not far below the pre-crisis levels (31 percent dissatisfied as compared to 28 in 2007). Moreover, evidence for that the crisis temporarily affected citizen behavior is found when we study change in net migration. Iceland is a small country with a population of only about 300 000. In the years preceding the crisis Iceland had seen a positive net migration of around 5 000. In 2009 it was still almost 5 000 but now negative. By 2012, the net migration had changed again and was almost zero.<sup>21</sup>

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<sup>20</sup> We thank Olafur Hardarson, Gunnar Helgi Kristinsson, and Eva Önnudóttir for providing detailed information from ICENES.

<sup>21</sup> Statistics Iceland, 1999-2012. <<http://www.statistics.is>> (Accessed Oct. 31, 2013)

### A test of concurrent validity

Compliance can be voluntary or non-voluntary. If the observed support-compliance correlations are valid, support attitudes should primarily co-vary with the voluntary component in the compliant behavior indexes. Moreover, since voluntary compliance is conceptually close to legitimacy, the voluntary component in the behavior indices should be highly correlated with measures of state legitimacy. Moreover, from the same logic follows that the non-voluntary component in the compliance indices should correlate weakly or not at all with measures of state legitimacy.

To test whether this is the case we followed a two-step procedure. First, we regressed our compliance indices on trust in output institutions, law abidance, and SWD (OLS estimates). The resulting predicted values represent between-country variations in compliant behavior that is accounted for by attitudinal political support. This variable is our best guess of the level of voluntary compliance across countries. Correspondingly, residuals – variations in compliant behavior that is unaccounted for – represent our best estimates of non-voluntary compliance across countries. Second, we correlated variables for predicted values and residuals with Gilley’s (2006) state legitimacy variable.

As reported in Table 7, results concur with our expectations. The predicted values-legitimacy correlations are strong for both country configurations, whereas the residual-legitimacy correlations are consistently weak and below traditional levels for statistical significance. These findings suggest that the observed correlation between attitudinal support and behavioral compliance does indeed capture a substantially meaningful relationship.

TABLE 7: VOLUNTARY COMPLIANCE AND LEGITIMACY

	World		OECD	
	Predicted Values (Voluntary Compliance)	Residuals (Non- voluntary Compliance)	Predicted Values (Voluntary Compliance)	Residuals (Non- voluntary Compliance)
	I	II	III	IV
Compliant Behavior	.756**	.238	.681**	.316
	.000	.139	.000	.102
Limited Compliant Behavior	.760**	.266	.688**	.340
	.000	.098	.000	.077
	N=40		N=28	

\*\* : Correlation is significant at the 0.01 level (2-tailed).

## Concluding Discussion

As commonly understood, legitimacy is a belief with behavioral consequences. As such, it is difficult to observe with precision. For instance, the analytical challenge to identify a construct that separate behavior that is driven by legitimacy beliefs (voluntary compliance) from behavior that is driven by other factors (non-voluntary compliance) is considerable. To set a more achievable goal we have relied on separate measures of the two constituting variables, and estimated their inter-correlation at the level of countries.

In this effort, we have turned to political support research for attitudinal constructs, and to state resource mobilization research for identification of compliant behaviors. The measures of support attitudes – institutional trust, law abiding attitudes, and satisfaction with democracy – are some of the most commonly occurring in the literature. The measure of compliance focuses behaviors that the literature identifies as particularly relevant for leaders to be able to make binding decisions – law abidance, tax compliance, and corruption.

Using data from comparative surveys and official statistics we find a strong and consistent correlation between the two main variables. Thus, when bringing together insights from two parallel lines of research, results show that variation in supportive attitudes goes hand in hand with acceptance of state dictates.

In addition to confirming an important relationship in research on state legitimacy, the study brings new evidence to the long-standing debate over measurement validity in political support research. When tested against theoretically grounded behavioral compliance indices, some of the standard survey indicators of system-level sentiments, including the frequently criticized SWD indicator, pick up relevant variations in citizen behavior. However, not all support indicators function equally well. In particular, as predicted by recent research on the importance of high quality output institutions for the functioning of societies (Rothstein 2009), trust in input institutions such as the parliament and the government are weakly related to citizen compliance.

Findings are largely robust across worldwide and OECD country configurations. Nevertheless, there is a systematic between-country difference in the support-compliance ratio. For a certain level of attitudinal political support, compliant behavior is more frequent in OECD countries than in less

developed countries. Drawing out implications of this finding, the well-established OECD states might be less vulnerable to declining levels of citizen support, whereas less developed countries will not benefit as much from surging levels of support.

Reflecting further over the implication of findings, causality is a key question. While theoretically significant, the observed correlation does not prove that attitudinal support is a driver of behavioral compliance. In fact, given the importance of output factors for supportive attitudes, it seems more relevant to view attitudinal support as a mediating factor. Precisely, the output citizens receive may affect their trust in output institutions and satisfaction with the way democracy works, and these support attitudes may generate varying levels of compliance with state dictates.

Moreover, while support and compliance are closely related, time likely plays an important role in the relationship. It is quite possible that political systems generate, or lose, support only slowly (cf. Easton 1975:444-445). If this is the case, increasingly dysfunctional political systems might retain 'goodwill' for some time and political systems must function well for a longer period of time before they are generally trusted. That would make support a lagging indicator. Another possible explanation is that political systems lose 'goodwill' quickly but gain it only slowly. That would make support something of a canary in the coal mine as loss of public attitudinal support might indicate a future deterioration in compliance.

With empirical evidence for a relationship between attitudinal political support and compliant behavior, the question of the exact nature of that relationship becomes even more pressing. As suggested above, our framework can be extended in different ways. One is to account for output factors and model the mediating effects of attitudinal support. Another approach is to consider time dynamics by collecting information for further time points. Still another way forward is careful examination on a country by country basis. Indeed, whether attitudinal political support is a mediator, a lagging indicator, or a canary in the coal mine is highly significant for how state legitimacy is understood!

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