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Institutional legitimacy: an exegesis of normative incentives

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This paper reviews the current thinking on institutions and finds that the notion of legitimacy is incompletely developed in the pervasive collective action model of new institutional economics. It argues that institutional legitimacy should be conceived as a set of *normative incentives* compelling people to uphold this institution and providing incentives for trust and successful institutional change. The result is a legitimacy model that allows us to better understand policy success and failures in water reform, by exploring both rules of the game and principles derived from narrative and hermeneutic analyses.

Keywords: water; institutional change; legitimacy; incentives; public policy

Introduction

This paper begins with a puzzle in institutional change within the area of water policy reform. The politically sensitive nature of such reform (for example water pricing or privatization) and the amount of investments required (in the billions of dollars, often overshadowing public spending for education) make such institutional change particularly contentious.

Within the larger literature on institutional change, there is a recent move towards examining complex policies as being embedded in the institutional endowments of a country. As such, success and failure come to be dependent on the interactions between endowments and policies. This notion can be seen in its fullest form in the work by Douglass North (1990) in which he considers legislative and executive institutions as institutional endowments. These in turn include the formal mechanisms for appointing law makers and decisions and for making laws. Besides that, there are also judicial institutions; customs and norms; the characters of contending social interests including ideology; and administrative capacities.

Much empirical work has placed emphasis on formal institutions and their impact on change (Levy & Spiller, 1994; Stern & Holder, 1999), but the puzzle on the sources of successful institutional change endures. Extant research establishes that institutional context is important, but it is not clear *how*.

This paper proposes making an examination of the informal institutions outlined by North: norms and interests. Further, in this examination it is clear that successful policies are *legitimate* in the sense of Weberian (1978): that they are accepted in some way by the public to which they apply. Can legitimacy, therefore, be the source of regulatory success? This paper argues that it is.

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The first part of this paper, examines the definitions of institutions, rules and legitimacy and finds that the ontology assumed by two leading scholars of institutional analysis – North and Ostrom – is unsatisfactory because it does not have a distinct and well-argued place for principles.

The second part questions this idea on the successful implementation of difficult water policies in strong states. If it can be shown that apparently complex policies succeed in these states not by *fiat* but because they possess moral incentives, then a place for moral incentives will have been won in any analysis of institutional legitimacy.

This paper adds to the current debate on institutional change in two ways. First, it broadens the current concept in the literature of institutional change in public policy by suggesting that change can be investigated as a response to normative incentives. Correspondingly, it also gives us room to argue that such incentives introduce the notion of rationality to public policy legitimacy. Second, it breaks the current impasse in the study of water utilities and the role public acceptance or trust play as variables for success.

Institutions and their normative foundations

Institutions are generally defined as structures that humans impose on their economic and social interactions. North (1994, p. 97) says that “institutions are the humanly devised constraints that structure human interaction. They are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions, and self-imposed codes of conduct), and their enforcement characteristics.” Together, he says, these institutions define the incentives present in society. He also writes of institutions as “mental constructs” or “subjective models”.

In their large-scale empirical study on water institutions, Saleth & Dinar (2004) operationalize this concept by showing how the perception of information, rather than information *per se*, accounts for how water reforms take place. They claim that “institutions are subjective in terms of their origins and operations, but objective in terms of their manifestations and impacts” (2004, p. 27). If this brief definition of institutions as social constructions and as collections of rules is accepted, it is obvious that rules do not, *by their nature*, compel obedience.

The missing ingredient is the normative foundation for obedience. A literature review shows that much work has been done on public trust. Studies have explored how people and organization’s trust in regulatory actors and stakeholders determines people’s attitudes and actions (Brunk, 2006; Priest, Bonfadelli & Rusanen, 2003). Here, much work has been done regarding how trust in institutions and key actors affects people’s support for new policies, especially in the area of science and technology (de Jonge, van Trijpa, van der Lansa, Renesb, & Frewer, 2008). When these institutions are not perceived as legitimate or credible, then policy or institutional change is likely to fail (Crawley, 2007; Lang & Hallman, 2005).

What are *legitimate* institutions?

The notion of justification in public policy manifests itself as a discussion on legitimacy. Political scientist David Beetham writes, “Rules cannot justify themselves simply by being rules, but require justification by reference to considerations that lie beyond them . . . For power to be fully legitimate, then three conditions are required: its conformity to established rules; the justifiability of the rules by reference to shared beliefs; the expressed

consent of the subordinate, or the most significant among them, to the particular relations of power” (Beetham, 1991, p. 19).

Another popular concept of legitimacy is given by Scharpf (1998, p. 3), who writes that legitimacy in practice is “of the authority to adopt collectively binding decisions to implement these with resources taken from the members of the collectivity, and ultimately by resort to the state’s monopoly of legitimate coercion”. These arguments, he says, must be arguments that are able to establish a *moral duty* to obey.

Gearey and Jeffery (2006) put it more simply by noting that theories of good governance already contain criteria for evaluating legitimacy. Many such theories distinguish between the level of input legitimacy (how decisions are taken) and output legitimacy (whether a goal has been achieved). Input legitimacy, therefore, is the idea that democratic decision making is legitimized due to the procedural guarantees of political rights to participate in political decision-making processes (Heinelt, Sweeting, & Getimis, 2006). In empirical investigations, such input legitimacy exists when there is a consensual or majority decision (Lijphart, 1984, 1991).

Rules and principles

If institutions are a collection of rules, and if legitimate institutions are justified by reference to ‘considerations that lie beyond them’, what exactly are these justificatory forces? Here, an examination and eventual modification of institutional theory may be useful. Institutional theorists are fond of citing law as a formal institution, and norms and customs as informal ones. But the ontology of law itself is a matter of some debate. What is law? Is it merely legal rules or does it comprise principles underlying these rules? This argument is captured in the Hart-Dworkin debate on legal positivism, which, over four decades, has run the gamut of interpretation of law, judicial discretion and whether right answers are ever obtained in law. However, this paper will focus on the distinction made by Dworkin (1977) between rules and principles and apply that to institutional theory. Dworkin argues that rules are logically different from principles in three ways: (1) rules are recognizable from their pedigree, whereas principles are not; (2) principles justify themselves, whereas rules do not; and (3) principles have weight, whereas rules do not. His analysis on *institutional* rules will be briefly replicated to see whether the same outcome is obtained.

Ostrom: rules as shared understandings

Ostrom notes that according to Max Black, the word “rule” is used to denote regulations, instructions, precepts, and principles (2005, p. 16). In institutional studies, the term is employed mainly in its regulatory sense, rules refer to something “laid down by an authority (a legislature, judge, magistrate, board of directors, university president, parent) as required of certain persons (or, alternatively, forbidden or permitted)” (Black, 1962, p. 115). For her, rules are defined as *shared understandings* by participants about enforced prescriptions concerning what actions (or outcomes) are required, prohibited, or permitted (Commons, 1968; Ganz, 1971; Ostrom, 1980).

While Ostrom herself does not make explicit whether rules and principles are distinct, it is argued here that, to do what she requires of them, principles must be distinct from rules. First, it must be recognized that Ostrom has a mature concept of rules, devising a syntax to describe both the nature and function of what she calls “generic rules”. Ostrom includes principles as part of the ontology of an institution. These principles may be considered as *general rules*. But this leads to two problems straightaway. First, they do not

fit into Ostrom's concept of rules. Second, as they are stated, they are incomplete, and cannot do what Ostrom expects, namely to apply more generally to a range of cases rather than to one specific case. Principles do not serve the same function as rules. Ostrom clearly intends principles to serve a different function: as a guide to designing long-surviving institutions.

Ostrom is a useful starting point, but the argument is incomplete. Why (and how) do people re-define their self-interest? What is the content of these normative incentives? Can they be created, or are they intrinsic in individuals? North (1990), in his theory of institutional change, has some answers, also embedded in his idea of rules. For him, both rules of the game and organizations are the players. They shape the incentives in society and provide the key to understanding social change.

North has an economist's view of institutions: they provide the structure of public life by making it predictable and include any form of constraint that human beings devise to shape human interaction. For him, institutions are both formal and informal. Formal constraints are rules, laws, and constitutions; and informal constraints are norms of behaviour, conventions, and self-imposed codes of conduct as well as their enforcement characteristics. Together, he says, these institutions define the incentives in society.

North suggests that formal and informal institutions change differently, because of the different factors governing them. Formal institutions change due to a change in the process forming such institutions. He appears to provide a role for principles in his idea of institutions based in the notion that principles are a form of *informal constraint*. Elaborating on them, he says that while formal rules come from a certain regulated process, informal rules emanate from society. As regards informal institutions, they can be "(1) extensions, elaborations, and modifications of formal rules; (2) socially sanctioned norms of behaviour; and (3) internally enforced standards of conduct" (North, 1990, p. 40).

To summarize, it can be seen that both Ostrom and North can make room for principles in their ontology of institutions, and indeed they must, if institutions are defined either as *shared understanding* or as *humanly-devised constraints on actions*. At the same time, these principles appear to be logically distinct from rules. If so, it can be seen that institutions must comprise both rules and principles. This section has given a working definition of the idea of institutions as well as that of institutional legitimacy.

Therefore, the existence of principles can be located within institutional theory. In addition to the three distinctions that Dworkin had earlier provided for, a fourth may be possible: while rules provide economic incentives for action, principles may provide some form of normative incentive. These four points are discussed in the two following sections.

What are the moral incentives present in water reforms? This question is investigated with respect to in two water utilities in Asia: Singapore's Public Utilities Board (PUB) and China's Yellow River Conservancy Commission (YRCC). With vastly different policy contexts, both of them have achieved the best performance among water regulatory utilities in Asia. The first case will be analysed with the idea of trust mediating against the 'yuck' factor in the use of recycled water for the city-state's drinking supply. For the YRCC, about 200 people in the 9 provinces through which the river flows took part in a survey outlining the current normative incentives.

Case Study 1: Singapore and indirect potable water reuse

Singapore is a small city-state, with a population of fewer than 6 million. While its economic performance is well known and researched, its water infrastructure and water security issues have only recently become publicly discussed. It is one of the few countries

in the world that prices water at cost recovery (Tortajada, 2006). It has also successfully implemented a controversial reused-water policy by pumping treated wastewater back into the reservoirs. The PUB is completely government owned, and is rated one of the best utilities in the world.

The difficult institutional change examined here is that of introducing recycled water as an alternative drinking water supply. This is a psychologically difficult task, and Singapore is only one of the very few countries in the world that have successfully achieved this change.

Since achieving independence in 1965, Singapore has been dependent on its neighbour Malaysia for much of its water supply. Over the past four decades, the two countries have experienced periods of good and bad bilateral relations. Despite the signing of two long-term water agreements, the issue of water security has not been fully settled (Luan, 2010). In 1997, Singapore publicly stated that it was aggressively looking at alternative sources of water. This was precipitated by the difficulties with Malaysia over the price of raw water, with the Malaysians threatening to increase prices by at least six times and with no set formula to guide peg to for future increases.

In 1998, Singapore began studying wastewater as a source of raw water. In 2003, the reused water, named NEWater, was introduced in the reservoirs.

Shaping norms and framing “yuck” in Singapore

The quality of the reused water quality was confirmed by the more than 20,000 analyses and tests. The findings recommended considering using it for indirect potable use by blending it with surface reservoir water. That is to say, the science is not well known, or indeed well understood publicly, but not all that difficult. At the same time, the issue of public acceptance or the “yuck factor” continues to dog attempts by governments elsewhere to introduce reused water. In Singapore’s case, the introduction of NEWater may be seen as having been helped by the sense of crisis generated by Malaysia’s decision to raise the price of water. There was also a concerted effort by the government to market NEWater to the public.

NEWater has augmented Singapore’s water supply by 302,000 m³ per day or about 15% of water consumption. By 2011, when the first of the two water agreements with Malaysia expired, the five NEWater plants had enough combined capacity to meet 30% of Singapore’s water needs.

Recycled water has been successfully introduced in Singapore, but as Stenekes, Colebath, Waite, and Ashbolt (2006) point out, the reasons for the failure or success of water recycling by the water industry or what this means for water management institutions, are unknown. Public acceptance is often cited as a factor, but how can this be measured? And, is unanimous public acceptance a necessary condition for the success of water policies? (Haddad & Kelso, 2003; Margolis, 1996.) Among those who oppose water reuse, there are those who base their point of view on an inadequate (or erroneous) understanding of the science behind water recycling, and the effect of public education is unclear (Dingfelder, 2004).

Another alternative is to look at the norms, customs and beliefs of a community regarding recycled water. In so doing, the media is a useful methodological partner in two ways. First, it influences how people think about the issue. Second, under the social constructivist theory (Finnemore, 1996; Risse, 2000; Schimmelfennig, 2001), the media itself constructs these very norms – that is to say, the media has the power to create knowledge and shape social norms for

water reuse. Here, it is important to note that norms, being social constructs, nonetheless have strong implications for objective reality.

An examination of trust relating to recycled water can be carried out on the basis of a narrative analysis of newspaper content. From 1997 to 2008, there were 223 reports about recycled water in Singapore’s newspapers (*the Straits Times*, *the New Paper* and *the Business Times*). Of these reports, 171 carried a positive tone or opinion about recycled water. The positive reports centred on how Singapore need not depend on Malaysia for its long-term water supply and how safe it was to drink recycled water. By the time NEWater began flowing into reservoirs in February 2003, the focus of subsequent media reports was on newer water-recycling technologies that could produce more NEWater and at a cheaper price. These technologies later made Singapore attractive to firms looking to carry out research and development in water recycling (Ching, 2010).

During the same period there were only nine reports that had negative tone or opinion about recycled water. Many of these reports were related to how NEWater would affect bilateral relations with Malaysia. Politicians in Malaysia took pot-shots at NEWater, warning their people that the water in Singapore could be unclean and even suggesting that Malaysia should sell sewage, not water, to Singapore. There was one report in *the New Paper* that said more had to be done to promote NEWater as there was not much awareness about it in the heartlands.

Of the reports, 40 mentioned the “yuck”, 29 of these were positive stories, and another 2 were neutral. Positive stories included stories about the government assuring Singaporeans that the water was safe to drink, public acceptance, and how foreigners were approving of recycled water after tasting it.

Given the narrative analysis of the newspapers, as well as the qualitative case study above, results are obtained as shown in Table 1.

The case of NEWater in Singapore, then, shows how the norms of a society can provide guides to action, i.e., how these norms themselves have been formed over a 10-year period, by consideration of issues such as water security and well-explained and transparent decisions by bureaucrats and technicians. In short, the policy succeeded because there was a high level of trust by the population in the government, but this trust is embedded in the institutional endowments in the first of normative incentives.

To show how powerful the concept of normative incentives is, an examination is made of how it can work not just in the small country of Singapore, but also in the large and complex country of China, with the unwieldy policy of the management of the Yellow River.

Table 1. Patterns of interaction and legitimization effects: NEWater

	Institutional change	Normative incentives	Interaction	Input legitimacy	Output legitimacy
PUB	Indirect potable water reuse	Securing water supply; trust in bureaucrats and overseas expert inputs; rational decisions by bureaucrats and technicians	Media; grassroots leaders; focus groups; explanation based on scientific data	Public consultation; third-party expert testimony	Public acceptance; external validation by a panel of international experts

Case Study 2: Incentives for cooperation – the YRCC and river governance

The Yellow River is the second-longest river in China, with a stream length of 5464 km. It passes through 9 provinces (Qinghai, Sichuan, Gansu, Ningxia, Inner Mongolia, Shaanxi, Shanxi, Henan and Shandong), and provides water to more than 140 million people and 160,000 km² of farmlands in the Yellow River basin.

The Yellow River is an incredible policy challenge. It floods when it pleases, drowning crops and depositing sedimentation as high as roof-tops. At other times, it shrinks to a trickle, refusing to travel all the way to meet the sea. This led to long stretches of drought along some of the most densely populated and farmed regions of China (Ringler et al., 2010). The problem of the Yellow River's caprice goes back to before 2000 BC. In modern times, the impact has been even more severe, due to the extensive human activities since the 1950s. The river experienced severe flow cutoff problems until the Yellow River Conservancy Commission (YRCC) reform from 1998 (Wang, 2003).

Its administration was typical under the bureaucratic system of "a multitude of dragons managing the waters". Some nine ministries and as many local government offices were regulating the river, with a complex interplay of local and economic interests in managing the Yellow River basin. First, there were different ministries, including water resources, environmental protection and agriculture, which shared authority for the management of the Yellow River for different policy priorities. Meanwhile, three reaches of the Yellow River were separately administrated by the nine provincial governments of the provinces through which the river flowed.

In dry seasons, the Yellow River's acute water scarcity led to fighting among the local governments over water consumption (Wang, 2003). At that time, the YRCC's authority was limited to the lower reaches; it was not clearly assigned the power to supervise the regulation enforcement in the upper or middle reaches. In other words, the YRCC had little authority in mediating trans-provincial water disputes, let alone the disputes among ministries. Even today, this authority is unclear and mediation is often a matter of political cut and thrust.

Poor governance and increasing demand worsened the zero-flow situation of the Yellow River. After the first zero flow in 1972, its frequency increased, reaching almost every year in the 1990s. The zero-flow problem was disastrous both for the economy and for the environment. Hundreds of bird and fish species disappeared from the area. The economic loss in agriculture and industry in the lower Yellow River amounted to RMB 2.22 billion in the 1970s and RMB 21.64 billion during 1990–1996 (Liu et al., 2007).

In 1998, the State Council promulgated a new settlement policy and assigned the Ministry of Water Resources the "unified management of water resources". With the move towards a centralized regulatory structure, the problem of "a multitude of dragons" managing the river came to an end. In March 1999, on behalf of the Ministry of Water Resources, the YRCC was officially empowered by the State Council to manage water allocation of the Yellow River basin.

Integrating water resources management

The implementation of IWRM took place with several formal institutional changes, the foremost of which was the Yellow River water-allocation regulations issued by the State Council. These provided the broad principles and rules for the YRCC in its key task of allocating water to the nine provinces. The water quota, set annually, was at the beginning a hugely contentious issue, with each side demanding more. Negotiations thus were a key part of the implementation process because the document provided only principles of

allocation, balancing the interests of all three reaches, nine provinces, and industrial and agricultural sectors in the Yellow River basin.

Aside from conducting such negotiations, the YRCC also put in place institutions for IWRM at the local level. First, specialised water-dispatching bodies were established in each province to coordinate water allocation, with executive responsibility given to leaders at different bureaucratic levels (from provinces to villages). Meanwhile, there was a great deal of supervision and inspection to ensure that the local managers kept to the agreed targets. For instance, the YRCC inspection team used site supervision, tours of inspection, spot checks, and other inspection mechanisms to ensure effective policy implementation of the water-allocation quota.

The system was also given some policy teeth, in formal water supply agreements, orders, and the “water fetching” permit system. Second, the YRCC also applied economic instruments for the integrated management of the Yellow River. Water pricing was categorized and standardized, based on different water usages for domestic, industrial and agricultural consumption. Charges for excessive water use were made very high, for the sake of water conservation.

Third, with respect to legislation and regulation, the YRCC promoted the Yellow River Water Allocation Bill, which received final approval from the State Council in 2006. The bill ensured the YRCC’s role in the Yellow River’s unified management and became the legal protection for integrated water resource management. Last, the YRCC used scientific and engineering techniques, for example remote sensing and automation. These were used to collect real-time river system information and coordinate the operation of the reservoirs.

In terms of outcomes, the change in management models appears to have worked. Since 2000 there has been no flow cutoff of the Yellow River. Basic industry, agricultural and household demands have been met. The river basin’s ecology has improved following the YRCC’s guidelines for the conservation of the rivers, estuary, and coastlines within the basin. A 2004 survey shows that the number of bird species in the Yellow River Delta National Nature Reserve increased from 187 to 283 within five years after the YRCC reform (Wang et al., 2006).

A bundle of incentives: the Yellow River water rights transfer

The solution was a policy innovation by the YRCC, implemented in pilot schemes in Ningxia and Inner Mongolia: the notion of water rights transfer, that is to “reallocate water from agriculture to industry through increasing irrigation efficiency, generally through engineering measures, such as canal lining” (Ringler et al., 2010). And the water rights transfers between agriculture and industry, have been encouraged by the central government and the YRCC, have been regarded as a win-win solution, not only supplying water for new industries but also promoting water efficiency in agricultural water use. Hitherto, more than two dozen cases of water rights transfer had occurred in Inner Mongolia and Ningxia, with the characteristic of “investing in water saving and transferring water rights” (Wang, 2012).

Economic incentives

It can be seen that money is coming from the private sector, because companies can see good returns. From 1999 to 2005, the central government invested RMB 32.83 million in water infrastructure in Erdos. Over the next three years, the local government invested

RMB 701.84 million in the two large irrigation areas. On average, the central government invested RMB 5.4 million each year – this means that local annual investment is nearly 40 times that of the central government.

Normative incentives

Normative incentives were investigated through a series of interview questions, testing the responses of 214 people who lived in the 9 provinces through which the river flows. They were asked to give their reactions to 32 opinions, which had been drawn from more than 400 pieces in newspapers and other publications. This is the first part of the Q sort method, where participants are asked to sort through statements which are seen to be representative of an issue. The Q methodology is supposed to be an objective way of capturing subjective preferences such as trust, beliefs and perceptions.

It provides a quantitative and objective way of looking at human subjectivity (van Eeten, 2001). This method is based on the assumption that subjective viewpoints can be communicated, however imperfectly, and that such viewpoints are presented from a self-referent position.

This method was chosen for this empirical investigation primarily because it allows us to appreciate the particulars of the case without losing the generalizations that policy analysis requires. As van Eeten (2001) points out, this method distils the diversity of views, opinions and ideas on any issue into a set of basic positions. This method has been increasingly used by policy analysts in recent years to understand and represent stakeholder positions. Durning (1999) argues that the Q methodology goes beyond the usual quantitative tool bag and is a tool to capture qualitative responses quantitatively.

In this paper, only the qualitative results are presented, not the full results, because the aim is to show merely the existence of normative incentives, not the full construction of the policy, which will be the subject of future research. The survey results form the basis of the analysis of normative incentives below.

1. **Fiscal prudence:** The local government is able to hold to the principle of being fiscally prudent since it levies a charge on industries that want to use water. The money is then transferred to water infrastructure projects. Officially it is called “water rights transfer”, but in reality it is an economic price, borne by the private sector as a cost of doing business. So if more money is needed, the government need not be the only one bearing the cost.
2. **Community benefits:** To make investment count, public support is vital. The government can raise money to build large infrastructure, and may indeed hit all its short-term investment targets. But water conservancy requires constant vigilance; and infrastructure requires careful husbandry; and both require public support. While people upstream tend to be more supportive of governance programmes and more confident of their success, it can be seen that more than 60% of the people interviewed felt that their community benefited from better governance.
3. **Environmental values:** Many people who lived in the nine provinces through which the Yellow River runs supported rejuvenation efforts. The majority (79%) of the more than 200 people surveyed said that they knew that the Yellow River had run dry, while 73% said they would be willing to make some sacrifices to ensure the environmental health of the river. There is also a prevailing sense of optimism.

The results of the above analysis and the investigation of Q methodology have been summarized in Table 2.

Table 2. Patterns of interaction and legitimation effects: YRCC

	Institutional change	Normative incentives	Interaction	Input legitimacy	Output legitimacy
YRCC	Integrated water resources management	Public goods (environment); community mutual gains; national pride	Leaders' site visits and inspiration; group discussions	Mandate from central govt.; local community support	No zero flow; social, economic, ecological, and environmental improvements

Conclusion

This paper has sought to demonstrate that the existence of *moral incentives* explains the successful implementation of difficult policies. It argues that the idea of legitimacy is key to such efforts and that any institution is legitimate when a large part of its target population recognizes and obeys the normative incentives set out by this institution. This is not to say that institutional incentives must be “pure” in the sense that economic and material incentives do not count in compelling obedience, but rather that normative ones are likely to exist for policies that are perceived to be legitimate.

This research is in part motivated by the difficulty that researchers have had in pinpointing the reasons for the success or failure of difficult water policies. Along with this empirical puzzle, there is a deeper theoretical one. In an era in which the idea of “institutions” dominates (Aspinwall & Schneider, 2000), research has been confined in the main to their rise and fall, and in their ability to bring about economic benefits and regulate public life.

The examination of the *normative* foundations of institutions, and the analysis of two water policies, allow us to address a fundamental issue for institutions: What is the basis for institutional legitimacy? How is compliance obtained and maintained? It has been shown that justification turns on a theory of institutional legitimacy that is predicated on the existence of some normative incentives. Such incentives provide a rational basis for understanding such notions as “public acceptance” and trust. The investigation has been operationalized in two ways: narrative analysis and the use of the Q methodology, both of which provide opportunities for future research.

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