

## University of Groningen

### The control imperative

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## FOUR

# Pathways to compliant implementation<sup>1</sup>

During the past decades, many governments have launched large-scale reform trajectories to modernize, and increase the effectiveness and efficiency of their various agencies (Pollit and Bouckaert 2004). However, there is quite some variation in the degree to which these reforms were actually implemented, beyond the rhetoric and intent, both across and within countries (Goldfinch, Derouen Jr. and Pospieszna 2013; Kuhlmann, Bogumil and Grohs 2008; Ongaro and Valotti 2008). This raises the question as to which conditions facilitate or inhibit compliant reform implementation, that is, the extent to which a reform is put into practice, and “has moved from rhetoric and intent to be reflected in design and action” (Goldfinch, Derouen Jr. and Pospieszna 2013, 51; also see Brunsson 1989; Fernandez and Rainey 2006; Oosterwaal 2011; Pollitt 2001).

With regard to potential answers, both scholarship and the public debate have shown interest in the link between resource investments and outcomes of reform (Andrews and Van de Walle 2012; Eliassen and Sitter 2008; Hood and Dixon 2013). Advocates of a resource-based approach point to understudied links between resource endowments and the propensity and

<sup>1</sup> Based on F. Nieto Morales, R. Wittek, and L. Heyse. 2014. “Organizational pathways to compliant reform implementation: Evidence from the Mexican civil service reform”, which is forthcoming in *Public Administration*.

success of organizational change (Kraatz and Zajac 2001). These links are far from straightforward. Some commentators make a case for a positive relation between resource availability, incentives, and organizational performance (Jackson 2007; also cf., Wittek 2007). It is argued, for instance, that sizable endowments provide flexibility in response to environmental changes, and improve organizational capacity to adopt and implement new policies (Bowman and Hurry 1993; De Lancer Julnes and Holzer 2001). Others suggest that resource-rich organizations have greater “organizational slack” that increases inertia (Cyert and March 1963), and that resource availability fosters stability of organizational strategies and commitments (Selznick 1957). A longitudinal empirical study of strategic change in the educational sector in the United States, for example, showed that resource endowments could decrease the propensity and success of change (Kraatz and Zajac 2001).

This chapter builds on this debate, and extends it to the study of intra-organizational conditions linked to compliant reform implementation in public sector organizations. Specifically, we consider the role of resource endowments in reform implementation in relation to various “implementation recipes”. The key question we address is *to what degree is the availability of large resource endowments, in combination with other organizational characteristics, a necessary precondition for compliant reform implementation in governmental agencies.*

This study makes three distinct contributions to the literature on public management reform. First, disentangling versions of technocratic and institutional implementation pathways, we identify three “recipes” leading to compliant reform implementation under conditions of adverse or abundant resource endowments. We argue that each of these provides a plausible pathway to compliant reform implementation. Second, we can assess the empirical validity of all three recipes with unique data from a comparative study of 55 organizations of the Mexican federal government, which implemented the 2003 Civil Service

Reform Act (or “SPC”; see Chapter 3, p.66). The aim of the SPC was to create a professional and meritocratic system that would eventually replace patronage-based practices (Arellano Gault 1999; Grindle 2012; Merino 2006). The central tool to achieve this objective, as we have discussed before, was the implementation of a new human resources management system for managerial positions in a large number of federal agencies (Pardo 2005). Third, we demonstrate the value of using (fuzzy set) qualitative comparative analysis (FSQCA) as an analytical strategy for an inter-organizational comparative study of reform compliance, looking into the co-occurrence of different causal pathways.

### *Implementation pathways*

A crucial assumption behind public administration reform is that decisions and investments made by legislators and policymakers are effectively translated into organizational change (Brunsson 1989; Brunsson and Olsen 1993; Oosterwaal 2011; Torenvlied 2000). A fundamental question is thus: under what conditions or through which pathways do implementers in governmental organizations move from intent and rhetoric to change that complies with the goals and program of reform, and how do these pathways relate to the size of resource endowments earmarked for reform.

One way to tackle these issues is to consider a number of theoretical pathways. At least two general pathways to compliant reform implementation can be distinguished: *technocratic* and *institutional* (cf. Christensen, Lægreid, Roness and Røvik 2007; De Lancer Julnes and Holzer 2001). Both offer distinct, theory-based configurations of organizational conditions contributing to compliant implementation, and in particular, present different possibilities for implementing reform in organizations with either small or large resource endowments. Specifically, these pathways differ with regard to the relative importance

they attach to (a) resource endowments; but also, (b) formal structures of control, (c) normative beliefs, and (d) implementers' interests. In this sense, different pathways offer more than lists of factors that arguably matter for implementation; they offer (comparable) configurations of conditions that, *as a set*, are causally linked to compliant reform implementation.

### *Technocratic pathway*

The technocratic pathway is characterized by an implementation model that emphasizes planning and control, as well as committing resources to implementation. From this perspective, implementation is mainly a matter of technical design (cf. De Lancer Julnes and Holzer 2001). The technocratic pathway is based on classic bureaucracy and (scientific) management theories. It focuses primarily on formal organizational conditions affecting policy implementation. Arguments underlying this pathway posit that translating policy decisions into actual organizational action requires technical control over agents who may intentionally or unintentionally deviate from implementers' intentions (Oosterwaal 2011). This pathway to compliant implementation is reflected in a top-down, linear model of change (Thomas and Grindle 1990, 1164; Van de Ven and Hargrave 2004). Accordingly, implementation is most successful when the administrative structure is well integrated from above (Goggin, Bowman, Lester, and O'Toole 1990; Pressman and Wildavsky 1984), which implies a significant degree of formalization and vertical interdependence. Organizational members comply through compensation and active regulation (Coleman 1990; Hechter 1987). Hence, implementation gaps—non-compliant implementation—are primarily the result of faulty design and lack of central control over policy components (Pressman and Wildavsky 1973).

Translated into the area of public sector reform, implementing organizational change requires ample resource investments. Resources are needed to transform organizational proce-

dures, rules and structures, hire new personnel and acquire or develop infrastructure. Implementing changes with limited resources may have negative consequences for other organizational activities or areas not directly related to change (Boyne 2003). In addition, implementation requires setting up efficient control and monitoring procedures (Boyne 2003; Fernandez and Rainey 2007; Goggin, Bowman, Lester and O'Toole 1990; Nica 2013; Rossotti 2005). This means both maintaining effective lines of authority, as well as ex ante and ex post controls (“fixing the game”) over procedures and decision-making (Bardach 1977; Chun and Rainey 2005; Oosterwaal 2011; Wood and Waterman 1991).

With its strong reliance on resource endowments and formal control, informal normative mechanisms play a very minor, if any, role in the technocratic pathway to compliant reform implementation. A well-designed formal governance structure aligns the interests of the implementers with the interests of the organization, thereby not needing additional normative support to succeed. Thus, according to the technocratic pathway, compliant reform implementation is achieved in public organizations with significant resource endowments (Goggin, Bowman, Lester, and O'Toole 1990) and robust central control over processes and decision-making (Hill and Hupe 2002; Mazmanian and Sabatier 1983). The previous can be summarized as follows:

*Technocratic pathway*—Compliant implementation of reform occurs in government agencies with (a) high resource endowments and (b) strong formal central control.

### *Institutional pathways*

The technocratic pathway builds on the rationalist assumption that higher investments in resources relate to higher compliance

in implementation (cf. Wittek 2007). An alternative framework to explain compliant reform emphasizes the normative legitimation of organizational processes and active bottom-up involvement of organizational members (Rainey 2003; Wittek 2007; Wittek and Van de Bunt 2004). Compared to technocratic pathways, an institutional model of implementation focuses primarily on the interplay between formal and informal structures of the public organization (see Christensen, Lægreid, Roness and Røvik 2007, 122-42; Rainey 2003). In particular, scholars highlight the “pattern maintenance” function of organizational norms (Scott 2008), as well as the regularizing effects of interpersonal trust (Mayer, Davis and Schoorman 1995; Nyhan 2000; 1999). On the one hand, informal norms prescribe legitimate ways of action, that is, they designate appropriate ways for pursuing organizational goals. Once norms are appropriated and legitimate expectations arise, focal actors acquire strong incentives to comply (Scott 2008), thereby fostering compliant reform implementation. High levels of interpersonal trust, on the other hand, help organizational members to deal with uncertainty, including that which arises from intentional efforts of organizational change. Two variations of the institutional pathway can be specified. The first is based on classic institutional theory, with two central arguments.

First, positive reciprocity expectations based on norms and intra-organizational trust allow individuals to cope with risk, facilitating cooperation, acquiescence and (group) identification (Ferrin, Bligh and Kohles 2007; Lundin 2007; Putman 2000). Intra-organizational trust is an important asset for the reforming public organization (see e.g., Brunsson and Olsen 1993; Fernandez and Rainey 2006; Rossotti 2005) because it allows organizational members to cope with risks inherent in reform initiatives (Neves and Caetano 2007), and it fosters public employees’ confidence in the organization’s ability to adapt to changing environments and turbulence (Nyhan 2000). Strong interpersonal trust also indirectly increases individuals’ commitment with the

organization, which in turn may enhance compliance (Kramer 1999).

Second, reforms violating prevalent norms or at odds with the culture of the public organization (Christensen, Lægreid, Roness and Røvik 2007; Nica 2013) are likely to face oppositional norms (Meyer and Rowan 1977; Nee 1998; Wittek and Van de Bunt 2004). That is, compliant reform is expedited if implementation strategies account for or prevent the emergence of oppositional norms (Scott 2008).

From a classic institutional perspective, large resource endowments would not be considered a central precondition for successful implementation. Instead, given some minimum resource allowance, compliant change is in principle possible if normative beliefs support implementation. The institutional approach would also make no strong predictions about the type of formal control structures: as long as the organization succeeds in eliciting normative attachment and avoids oppositional norms, implementation of change is feasible. Hence, organizational action (including organizational change) requires some degree of formalized control to contain conflict and address power dependencies (Selznick 1996; Greenwood and Hinings 1996). All the previous can be summarized as follows:

*Classic institutional pathway*—Compliant reform implementation occurs in government agencies with (a) strong/weak formal central control, (b) weak oppositional norms and (c) high trust.

The second institutional pathway builds on further developments in institutional theory that maintain the focus on the influence of informal governance structures, but also make a strong point of incorporating incentives and interests as causal conditions (Nee 2005). This “interest-based” institutionalism underlines the need to align organizational members’ interests and formal and informal organizational structures to achieve



compliant action (Nee 2005; 1998). Given this, strong positive incentives and commitment are a major precondition for successful implementation (cf. Bénabou and Tirole 2003). Both internal and external conditions to the organization that affect implementers' interests (e.g., changes in the organization's environment, high commitment cultures, contingent rewards, or fear of sanctions) can affect implementation.

Strong internal commitment combined with demanding organizational environments favorable to change should enhance compliant reform implementation because these pressures align implementers' interests with reform goals (see also, Kuhlmann, Bogumil and Grohs 2008). Some suggest that large resource endowments and financial incentives may undermine implementers' intrinsic motivation to implement changes (cf. Frey and Jegen 2001; Osterloh and Frey 2000). Therefore, from this perspective, the combination of interest alignment, high trust and weak oppositional norms should lead to compliant reform implementation, even if resource endowments are not large.

*Interest-based institutional pathway*—Compliant reform implementation occurs in government agencies with (a) weak oppositional norms, (b) high trust, (c) strong implementer commitment, and (d) strong external demand.

### *Research design*

#### *Case: Reform of the Mexican Civil Service*

Providing a strong answer to our research question requires comparative data on a set of government agencies that implemented organizational changes with varying degrees of success (compliance), and which preferably were exposed to the same reform and operate in the same politico-administrative context.

## IMPLEMENTATION PATHWAYS

The reform of the Mexican Civil Service (2003-2012) meets this requirement. The SPC reform is interesting for at least two reasons. First, it involved several different organizations. Transversal implementation (i.e., implementation in an entire set of government organizations) allows for a comparison of public organizations with different characteristics, including different resource endowments, levels of control, oppositional norms and trust. Second and more importantly, despite limited financial resources and strong opposition to the reform (OECD 2011), the SPC was successfully implemented in several organizations (ASF 2012), indicating that a variety of potential pathways to compliant reform may be present. The case therefore permits a closer examination of the link between reform implementation and local organizational characteristics.

For the largest part of its modern history, the Mexican federal government was dominated by a single political party, and political and bureaucratic leaders enjoyed ample freedom in the recruitment and management of the federal workforce (Arelano Gault 1999). Only by the end of the 1980s did the political system begin experiencing increased electoral competition and democratization. This coincided with major economic reform and the entry of Mexico in 1994 to NAFTA and the OECD. After 2000, when the opposition won the presidential election for first time was a round of political and administrative reform initiated. The 2003 SPC reform was intended to modernize federal HRM policy, by introducing a meritocratic system into several agencies and ministries.

Commentators still debate whether the SPC reform has been as successful (or not) as similar reforms in other countries (Grindle 2012; OECD 2011). Mixed evidence shows that in some areas, SPC implementation was very successful whereas in others it either failed or changes were marginal. For instance, as we saw in Chapter 3, some patronage-based practices regarding hiring and recruitment have proven extremely resilient. Conversely, the adoption of new rules for performance evaluation has been very

successful, reaching 96% of the organizations covered by the SPC system (SFP 2012). Furthermore, evidence shows much variation in the degree to which federal organizations changed their rules and processes to comply with the SPC reform.

### *Data*

We collected data from 55 ministries and agencies of the Mexican federal government that were the object of the SPC reform. The collection has two sources: survey panel data and secondary data gathered from official records. Survey data was collected in early 2012 through an online (Spanish) questionnaire sent to a panel of key informants in all federal organizations forming parts of the SPC system. We established contact first with the Ministry of the Public Service, which was in charge of overseeing application of the reform. After explaining the aim of our research, the Ministry agreed to facilitate data collection. Officials of the Ministry's Unit of Human Resources Policy communicated with chief administrative officers (or equivalents) in each organization covered by the SPC system. They presented the study and research team, and encouraged participation. Next, we established direct communication with each organization, targeting three informants per organization: the chief administrative officer (or equivalent), human resources director general (or equivalent), and the internal auditor in chief. These three informants not only played a pivotal role in the implementation of the studied reform (OECD 2011), but also were in an advantageous position to inform us about organizational characteristics. Informants' participation in this study was at all-time strictly voluntary. In accordance with the privacy protocol agreed with the Ministry and informants, all personal information is considered confidential. Using this protocol, we were able to collect information from 55 organizations (73.3% of all organizations covered by the SPC system; see Table 4.1).

IMPLEMENTATION PATHWAYS

TABLE 4.1 *Organizations that belong to the SPC system*

		<i>Organization</i>
<i>Law and order</i> (N=7)	A01	Ministry of the Interior
	A02	Ministry of the Public Service
	A03	Legal Advisor to the Federal Executive
	A04	Publications and Illustrated Magazines Commission
	A05	Mexican Commission for Assistance to Refugees
	A06	National Population Council
	A07	Institute of Management and Valuation of National Assets
<i>Economy</i> (N=24)	B01	Ministry of the Treasury and Public Credit
	B02	Ministry of Economy
	B03	Ministry of Energy
	B04	Ministry of Communications and Transport
	B05	Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food
	B06	Ministry of Environment and Natural Resources
	B07	Ministry of Tourism
	B08	Federal Telecommunications Commission
	B09	General Coordination of the National Program of "Solidaridad" Companies
	B10	Higher Agricultural School of Guerrero State
	B11	Agricultural and Fishing Information Service
	B12	National Protected Natural Areas Commission
	B13	Federal Attorney for Environmental Protection
	B14	National Seed Inspection and Certification Service
	B15	National Institute of Fishing
	B16	National Sanitation, Safety and Agricultural and Livestock Quality Service
	B17	National Commission for Nuclear Safety and Safeguards

TABLE 4.1 (cont.)

		<i>Organization</i>
<i>Economy (cont.)</i>	B18	National Insurances and Bonds Commission
	B19	National Aquaculture and Fisheries Commission
	B20	Federal Regulatory Reform Commission
	B21	Federal Competition Commission
	B22	Center for Advanced Tourism Studies
	B23	“Angeles Verdes” Corporation
	B24	Agricultural and Livestock Commercialization Services
<i>Social welfare (N=24)</i>	C01	Ministry of Social Development
	C02	Ministry of Health
	C03	Ministry of Public Education
	C04	Ministry of Labor and Social Welfare
	C05	Administration of the Patrimony of the Public Welfare
	C06	Federal Commission for Protection from Sanitary Risk
	C07	National Medical Arbitration Commission
	C08	National Bioethics Commission
	C09	National Center of Technological Excellency in Health
	C10	National Center for the Prevention and Control of Addictions
	C11	National Center for the Prevention and Control of HIV-AIDS
	C12	Psychiatric Services
C13	National Social Health Protection Commission	
C14	National Commission for the Pension System	
C15	National Center of Blood Transfusion	
C16	National Coordination of the Human Development Program “Oportunidades”	
C17	Federal Attorney for the Defense of Labor	
C18	Federal Administration of Educational Services in the Federal District	

IMPLEMENTATION PATHWAYS

TABLE 4.1 (cont.)

		<i>Organization</i>
	C19	National Culture and Arts Council
	C20	National Institute of Anthropology and History
<i>Social welfare</i>	C21	National Institute of Fine Arts
<i>(cont.)</i>	C22	National Institute of the Copyright
	C23	National Polytechnic Institute
	C24	National Pedagogical University

As expected from the transversal nature of the SPC reform, surveyed organizations show significant diversity in their organizational characteristics. Overall, 29% of the surveyed organizations are ministries (*secretarías*), and the remaining 71% are agencies (*órganos desconcentrados*). Ministries represent the strategic core of the executive branch. They design, evaluate and oversee the bulk of federal programs and policies. Agencies are subordinate in all cases to responsible ministries. They are decentralized and semi-autonomous, with both policy implementation and supervisory powers. Most ministries and some concrete agencies have a territorial structure that combines a head office (predominantly in Mexico City) and branch offices in each or some of the 31 Mexican states. To control for this factor, we explicitly asked informants to limit their responses to the head office only. Further, sampled organizations may be classified in three groups (Table 4.1). The first group (10% of surveyed organizations) includes those devoted to internal government, regulation of the public service, or legal advice to the executive (e.g., Ministry of the Interior). The second type (45% of surveyed organizations) is related to fiscal and economic regulation, the construction and maintenance of infrastructure or promotion and regulation of concrete economic areas/activities (e.g., Federal Telecommunications Commission). The third type is dedicated to social policy and welfare services like education and health (45% of surveyed organizations; e.g., National Commission for the Pension System). Finally, in all but one surveyed organization, SPC

rules and procedures were implemented to some extent (see below).

*Method and measurements: Fuzzy set qualitative comparative analysis (FSQCA)*

Each of the three pathways to compliant implementation acknowledges the potential influence of a combination of organizational conditions. Rather than providing mutually exclusive “black or white hypotheses”, these can be read as alternative “recipes” that emphasize certain combinations of conditions over others. Pathways specify a causal set. That is, they establish a number of necessary organizational conditions of unnecessary yet sufficient causal configurations (pathways) leading to compliant implementation. One vital methodological implication resulting from this is that the analytical method should be able to distinguish different configurations important to successful implementation (cf. Matland 1995). Put another way, the empirical analysis should be able to account for “equifinality”, that is, to reveal potential *alternative* paths leading to the same outcome (for a useful discussion of the notion of equifinality, see Mahoney and Goertz 2006).

Based on the theoretical discussion, each template provides a plausible pathway to compliant implementation. Both the theoretical expectations and specifics of our sample put restrictions on the data analysis method. First, the three pathways do not compete with each other in the sense of contradicting hypotheses. They differ mainly in the combination of causal conditions and thus the relative importance they attach to each condition, *in combination with* other conditions. Second, configurations specified by each pathway can be treated as functionally equivalent solutions leading to the same outcome. In this sense, multivariate statistical analyses geared to explaining variance in the outcome are not appropriate. Third, the number of organiza-

tional units (N=55) is inadequate for extended statistical analysis.

Instead, a tool that can meet these requirements is fuzzy set qualitative comparative analysis (FSQCA). FSQCA is a powerful method grounded in set theory, formal logic and Boolean algebra that is particularly suited to configurational analysis in “small-N” samples (Schneider and Wagemann 2010). The FSQCA analysis presented in this section investigates and compares different causal recipes (pathways) leading to compliant implementation in the case of the Mexican SPC reform.

### *a) Measurements (fuzzy sets)*

The basis of FSQCA analysis is the definition of theoretically relevant causal conditions and their translation into calibrated fuzzy sets. In contrast to conventional dichotomous measurements (“crisp sets”), using fuzzy sets let us assess set membership in the interval between a fuzzy score of 0 and a fuzzy score of 1. This allows us to refine the operationalization of causal conditions, and retain qualitative nuances of the data that could otherwise be overlooked. Calibration of each fuzzy set indicates the qualitative criteria used to determine a case’s degree of membership in the set of interest. In particular, three qualitative break-points for each fuzzy set need to be defined by the researcher: full membership, full exclusion, and crossover point. The first determines the point at which a concrete case is considered to be “fully in” a specified set. The second refers to the point at which a concrete case is considered to be “fully out”. The crossover point indicates the value of maximum ambiguity, that is, the point at which a given case cannot be considered either “in” or “out” a given set (Ragin 2008).



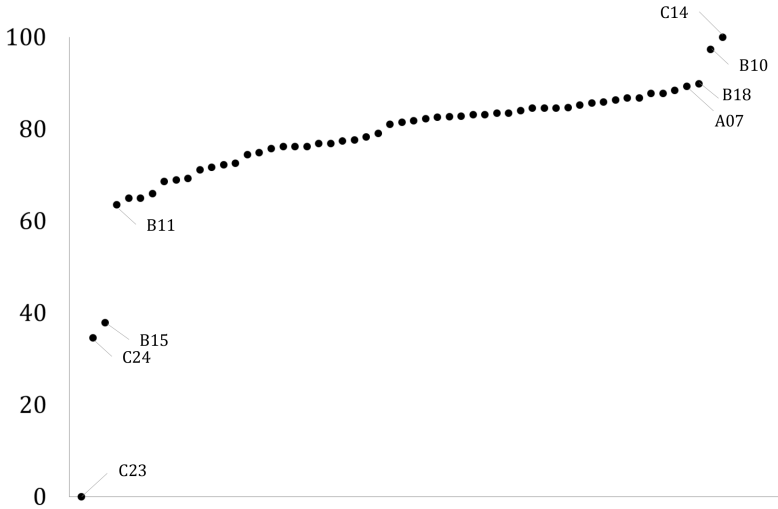


FIGURE 4.1 — *Compliant SPC implementation in 55 organizations*

*Outcome (compliant implementation).* To estimate to what extent all 55 organizations complied with the SPC reform, we used public data reported by the Ministry of the Public Service that reflect each organization's level of compliance with the Civil Service Operative Program (SPCOP). Each organization received a score representing the overall percentage of fulfilled SPCOP goals that could be verified in the administrative record. A score of 100 means that an organization effectively adopted and implemented all changes required by the SPCOP, and represents total compliance with the SPC reform. Figure 4.1 shows the distribution of SPCOP scores for all studied organizations, ranging from 0 to 100. We used these scores to construct a fuzzy set of organizations that successfully implemented the SPC reform. Using the direct method for calibrating fuzzy sets (see Ragin 2008), the threshold for full membership in the set (fuzzy score=0.95) is a score of 90 (compliance with 90% of SPCOP goals), the crossover point (fuzzy score=0.5) is a score of 70 (compliance with 70% of SPCOP goals), and the threshold for full exclusion from the

set of compliant reform implementers (fuzzy score=0.05) is a score of 60 (compliance with 60% of SPCOP goals).

*Resource endowment.* To measure resources available for implementation and operation of the reform, we used financial data from the Ministry of the Treasury ([www.shcp.gob.mx](http://www.shcp.gob.mx)), and data on the number of administrative positions in each organization that formed part of the SPC system by January 2011 to control for organizational size (data is publicly available via the INFOMEX system of the Federal Institute for Access to Public Information, [www.infomex.org.mx](http://www.infomex.org.mx)). We calculated the ratio between allocated budget and the number of civil service positions in each organization. Thus measurement of resources is limited to a financial operationalization of endowments, but is sensitive to the size of the reform's target population per organization (number of managerial positions linked to the Civil Service Reform Act; see also OECD 2011). The organization in the most advantageous position could spend about 2700 USD per position, whereas the organization in the worst position could spend about 37 USD per position. Organizations with endowments that amounted to 817 USD per position (i.e., at least a third of the resources available to the top organization) or more were considered fully in the set of organizations with large resource endowments (fuzzy score of 0.95 or above). We use the average score for all organizations (672 USD) as crossover point (fuzzy score=0.5). Organizations with endowments equal to or less than 532 USD per position (i.e., only a fifth of resources available to the top organization) were excluded from the fuzzy set (fuzzy score of 0.05 or less).

*Central control.* Strong central control was measured by asking informants: "How centralized are decision-making and control over processes in this organization." Response was coded on a five-point scale ranging from 1: very decentralized to 5: very centralized. We averaged scores of all informants per organization to obtain organizational scores (cf. Enticott, Boyne and Walker 2009), which we then used to determine membership in the fuzzy set of organizations with strong central control. The

threshold for full membership in the fuzzy set (fuzzy score=0.95) equals an organizational score of 5 (very centralized decision-making and control), the crossover point (fuzzy score=0.5) is an organizational score of 3 (neither centralized nor decentralized control), and the threshold for full exclusion (fuzzy score=0.05) is equivalent to an organizational score of 1 (very decentralized decision-making and control).

*Implementer commitment.* To account for implementers' commitment to adopt and execute the SPC reform, we asked informants: "Is lack of will or support from organizational members a major obstacle for the SPC in this organization?" Individual response was coded as a number in a 1:10 interval, where a score of 10 means that lack of will or support is a major obstacle and 1 that it is not a major obstacle. Individual scores were reversed so that higher values reflect higher commitment. We then averaged scores to produce organizational scores. We use these to define membership in the fuzzy set of organizations with strong implementer commitment. The threshold for full membership in the fuzzy set (fuzzy score=0.95) equals an organizational score of 6.55 (high commitment), the crossover point (fuzzy score=0.5) is an organizational score of 6.04 (average commitment), and the threshold for full exclusion (fuzzy score=0.05) is equivalent to an organizational score of 5.53 (low commitment).

*External demand.* To measure external demand, we asked: "To what extent do you agree that demands for better performance coming from citizens and/or users of this organization have increased in the last five years?" Responses were coded on a five-point scale ranging from 1: strongly disagree to 5: strongly agree. Using organizational scores, we determined membership in the fuzzy set of organizations with strong external demand. The threshold for full membership in the set (fuzzy score=0.95) is an organizational score of 5 (very strong demand), the crossover point (fuzzy score=0.5) is an organizational score of 4 (strong demand), and the threshold for full exclusion

from the set (fuzzy score=0.05) is an organizational score of 2 (weak demand).

*Interpersonal trust.* To measure interpersonal trust we asked informants "To what extent do you agree that, in general, in this organization subordinates and superiors trust each other." Individual responses were coded on a five-point scale ranging from 1: strongly disagree to 5: strongly agree. As before, individual scores were averaged to produce organizational scores. The threshold for full membership in the set (fuzzy score=0.95) is an organizational score of 4 (presence of interpersonal trust), the crossover point (fuzzy score=0.5) is an organizational score of 3 (weak presence of interpersonal trust), and the threshold for full exclusion from the set (fuzzy score=0.05) is an organizational score of 2 (absence of interpersonal trust).

*Oppositional norm (Patronage).* We measured the importance of patronage in an organization, as evidence of a norm that directly opposed objectives of the SPC reform (see Chapter 3, pp.69-71). In other words, this item measures the existence of oppositional norms. We asked informants: "In general, how important is loyalty to a person or group to obtain promotions or to pursue a career in this organization?" The response was coded on a five-item scale ranging from 1: not important to 5: extremely important. Using organizational scores, we defined the threshold for full membership in the fuzzy set of organizations with strong patronage norm (fuzzy score=0.95), an organizational score of 4 (loyalty to a group is very important to obtain promotions and/or pursue a career in the organization), the crossover point (fuzzy score=0.5) is an organizational score of 3, and the threshold for full exclusion (fuzzy score=0.05) is equivalent to an organizational score of 2 (loyalty to a group is only somewhat important). Table 4.2 presents the overall distribution for all fuzzy sets; that is, the percentage of cases that fall within different ranges (more "in" or "out") of observed conditions (resources, control, trust, etc.).

TABLE 4.2 *Fuzzy sets of conditions leading to compliant implementation*

	<i>Fuzzy score range</i>				
	$\leq 0.05$	<i>0.06</i>	<i>0.5</i>	<i>0.51</i>	$\geq 0.95$
		-		-	
		<i>0.49</i>		<i>0.94</i>	
C. implementation	0.05	0.13	0.00	0.76	0.05
Resources	0.47	0.02	0.00	0.27	0.24
Control	0.11	0.02	0.24	0.18	0.45
Trust	0.09	0.00	0.33	0.15	0.44
Oppositional norm	0.51	0.13	0.20	0.02	0.15
Commitment	0.38	0.05	0.00	0.16	0.40
External demand	0.04	0.13	0.35	0.20	0.29

NOTE:

Each row represents the percentage of case that fall within different ranges of each causal condition (fuzzy set)

All coefficients range 0-1

### *b) Analytical strategy*

Using FSQCA, we can consider the varying degrees of membership in all logically possible combinations (configurations) of a given set of causal conditions and then, systematically and formally investigate the connections between causal conditions and outcome. Specifically, this method allows for assessing whether membership in a combination of causal conditions (causal recipe) can be considered a consistent subset of membership in a given outcome. Configurational FSQCA analysis reveals which combinations of causal conditions consistently relate to compliant implementation.

First, we calculated the degree of membership of each case in all logically possible combinations of causal conditions. With six causal conditions (resource endowment, trust, central control, oppositional norm, commitment, and external demand), there are 64 combinations. Out of these, only 12 (18.7%) have at least one case with greater than 0.5 membership (i.e., beyond the point of maximum ambiguity) in the specific causal recipe. We use this as selection criterion for distinguishing empirically rele-

vant combinations (see Table 4.3). The additional 52 combinations were treated as remainders in the next analysis.

TABLE 4.3 *Truth table*<sup>a,b</sup>

<i>C</i>	<i>R</i>	<i>W</i>	<i>N</i>	<i>T</i>	<i>D</i>	<i>Count</i>	<i>Consistency</i>	<i>Outcome</i>
1	1	1	1	0	0	1	0.99	1
1	0	1	0	1	1	1	0.99	1
1	1	1	0	1	1	2	0.98	1
1	0	1	0	1	0	1	0.98	1
0	0	1	0	1	0	1	0.98	1
1	1	1	0	1	0	1	0.98	1
1	1	1	1	1	1	1	0.96	1
0	0	1	0	1	1	2	0.92	1
1	1	0	0	1	1	1	0.91	1
0	0	0	0	1	1	1	0.89	1
0	1	0	0	1	1	1	0.83	0
1	0	1	1	1	1	1	0.78	0

NOTE:

<sup>a</sup> Only configurations with at least one case with greater than 0.5 set membership

<sup>b</sup> Each row represents an empirically valid combination of present (1) or not present (0) causal conditions as (consistent) subsets of the outcome (compliant SPC implementation)

Abbreviations:

C: control, R: resource endowment, W: commitment, N: oppositional norm, T: trust, D: external demand

Second, we assessed whether subset relations between configurations of causal conditions and the outcome could be demonstrated in the data. With fuzzy sets, a subset relation is demonstrated mathematically by showing that degree of membership in a given causal recipe is consistently less than or equal to degree of membership in the outcome (“consistency”). Table 4.3 reports on the measurement of consistency for each of the 12 configurations (Table 4.3 is also called a “truth table”). These scores range from 0.78 to 0.99, indicating little spread in the degree to which the subset relation is satisfied. In the subsequent truth table analysis, the nine combinations with consisten-

cy scores of at least 0.89 were treated as subsets of the outcome. The remaining combinations failed to satisfy this criterion.

Third, we used FSQCA software (v.2.5; Ragin, Drass and Davey 2007) to derive truth table solutions. We consider the parsimonious and intermediate solutions. The first permits the incorporation of any counterfactual (remaining) combination that contributes to a simpler solution. The second derives a result that considers a priori plausibility of counterfactual combinations; that is, it formalizes theory-based expectations of the effects of causal conditions on the outcome: compliant implementation (see Ragin 2008). Put differently, it only uses counterfactual combinations that are plausible given evidence and existing knowledge. We present these two solutions next.

## *Results*

The *parsimonious solution* yields two alternative paths to compliant reform implementation, as expressed in the Boolean solution formula:

$$(\sim R \cdot \sim N) + (R \cdot C)$$

where R is the fuzzy set of organizations with large resource endowment, N is the set with strong oppositional norm, C is the set with strong central control,  $\sim$  indicates negation of a fuzzy set,  $\cdot$  represents the logical AND, and + represents the logical OR. The parsimonious solution reveals that (1) the combination of small resource endowment and weak oppositional norm (loyalty to a group is only somewhat important to pursue a career and obtain promotions), and (2) the combination of strong control and large resource endowments is linked to compliant SPC reform implementation in our data. While this parsimonious solution leads to an elegant result, it may incorporate too many counterfactuals that in turn, may be difficult to account for in terms of theoretical

and substantive knowledge. For example, the parsimonious solution above includes the combination of ample resources, strong central control, low commitment to reform, and strong opposing patronage norms, which has no empirical foothold in our data and is difficult to defend from a theoretical view (see, e.g., Grindle 2012; also cf. Migdal 2009).

TABLE 4.4 *Four recipes for compliant implementation*

<i>Configurations</i>	
1.-	(RESOURCES · CONTROL · COMMITMENT)
2.-	(RESOURCES · CONTROL · oppositional norm · TRUST · EXTERNAL DEMAND)
3.-	(resources · oppositional norm · TRUST · COMMITMENT)
4.-	(resources · control · TRUST · oppositional norm · EXTERNAL DEMAND)

NOTE:

Conditions in upper case are present; conditions in lower case are negated. The four configurations (pathways) are linked through the logical OR. Conditions within a configuration are linked through the logical AND

The *intermediate solution* solves this problem. It indicates that four causal recipes are linked to compliant reform implementation (Table 4.4). In Boolean notation the resulting formula is:

$$(R \cdot C \cdot W) + (\sim R \cdot \sim N \cdot T \cdot W) + (\sim R \cdot \sim N \cdot \sim C \cdot D \cdot T) + (R \cdot C \cdot \sim N \cdot D \cdot T)$$

where R is the fuzzy set of organizations with large endowments, C is the set with strong central control, T is the set with interpersonal trust, W is the set with strong implementer commitment to reform, N is the set with strong oppositional norm, and D is the set with strong external demand.

The four configurations are similar in that they all refer to the presence or absence of resource endowments. Further, in



the two configurations that link limited resources to outcome also link presence of trust and weak patronage norms to the outcome. These results confirm that conditions linked to compliant reform implementation are configurational in nature; different recipes may lead to the same outcome (equifinality); and in the absence of plentiful resources, conditions highlighted by institutional templates become relevant.

After comparing the parsimonious and intermediate solutions, the specific structure of each of the four configurations can be determined. This derives from the fact that terms in the parsimonious solution must be part of any (intermediate) solution—that is, the intermediate solution must be a subset of the parsimonious solution (Ragin 2008, 160-75). Table 4.5 shows “core” and “contributing” causal conditions, as well as consistency and coverage measurements per each configuration. This table illustrates the ways in which surveyed organizations compliantly implemented the SPC reform. We first discuss to what degree the four empirically derived configurations match the three theoretical pathways presented above (Technocratic, Classic Institutional, and Interest-based Institutional), and present general observations thereafter.

The empirical pattern closest to the *technocratic pathway* is the first configuration. It suggests that compliant implementation requires a rich resource endowment, strong centralized control, but also strong implementer commitment. Strictly speaking, the presence of the latter disconfirms the parsimonious version of the technocratic pathway. The additional requirement of commitment in configuration 1 suggests that classic technocratic assumptions would have to be extended by a stronger emphasis on interests, particularly implementer commitment. Configuration 2 does not contradict the technocratic pathway, but demonstrates that for the Mexican case to lead to compliant implementation, it would have to be complemented with institutional conditions.

IMPLEMENTATION PATHWAYS

TABLE 4.5 *Structure, consistency and coverage of recipes for compliant implementation*

	<i>Configurations<sup>a</sup></i>			
	1	2	3	4
Resources	●	●	○	○
Control	●	●		○
Trust		●	●	●
Op. norm (patronage)		○	○	○
Commitment	●		●	
External demand		●		●
Consistency	0.95	0.95	0.95	0.90
Raw coverage	0.25	0.23	0.31	0.24
Unique coverage	0.11	0.07	0.12	0.08

NOTES:

<sup>a</sup> Consistency cutoff: 0.89

● =core causal condition; ○ =core causal condition (negated);

● =contributing causal condition; ○ = contributing causal condition (negated)

The *classic institutional pathway* favored the combination of control with trust and the absence of oppositional norms. It did not make strong assumptions about resource endowments. Configuration 2 comes closest to this pathway. It contains all three conditions, but adds large resource endowments as a necessary requirement. Thus, in strict sense, this observed configuration does not solve the problem for SPC implementers in organizations with small endowments. Another empirical pattern coming close to the ideas behind an institutional pathway is configuration 4. The result suggests that compliant implementation requires trust and strong external demands in combination with the absence of centralized control, oppositional norms, and large resource endowments. Hence, in contrast to configuration 2, compliant implementation is possible even with a low budget, given that control is not centralized, there are sufficient external demands and the normative basis is strongly supportive of the change.

The *interest-based institutional pathway* relaxes the set of conditions specified by the institutional framework, dropping the requirement of strong/weak central control and adding emphasis to commitment and external demands as ways to align implementers' interest with reform. The empirical pattern coming closest to this pathway is configuration 3. The main difference with the hypothesized pathway is that external demands are not required, but implementer commitment is.

More generally, two configurations require large resource endowments and two do not. This suggests that there are indeed two fundamentally different routes to compliant implementation, at least regarding the availability of resources earmarked for reform. Another notable feature of the four configurations is that in three of them, the combination of trust and the absence of oppositional norms are linked to the outcome, supporting one of the major claims of institutional approaches on implementation. Results show that (1) although empirically important, the technocratic pathway characterized by the existence of strong centralized control and availability of large resource endowments does not predominate across instances of compliant SPC reform implementation. (2) Institutional pathways mainly characterized by weak oppositional norms and the presence of interpersonal trust are also a subset of the instances of compliant implementation, even if resources are limited.

Further, we selected representative organizations with membership scores above 0.5 in each of the configurations. The idea was to detect additional patterns underlying differences in compliant SPC implementation (Table 4.6). First, the "most populated" configurations in Table 4.6 are 1 and 3 (with 14 and 8 cases with fuzzy scores above 0.5, respectively). Configurations 2 and 4 only include three cases each that fulfill this criterion. The two most populated configurations (1 and 3) come closest to the technocratic and the interest-based institutional pathways, respectively. In our data, social welfare organizations (e.g., welfare administration services and health procurement agencies) pre-

## IMPLEMENTATION PATHWAYS

dominate in the technocratic pathway. Economic policy organizations (e.g., organizations related to agriculture and livestock policy, as well as energy and telecommunications regulatory agencies) predominate in the interest-based institutional configuration. No consistent differences appear from the distribution of ministries versus agencies across configurations. Although evidently beyond our theoretical framework, these additional insights suggest the possibility that differences in organizational task or policy domain/sector could relate to differences in the efficacy of different pathways to reform implementation.

TABLE 4.6 Sectorial patterns of compliant implementation

	<i>Configurations</i>			
	1	2	3	4
N <sup>a</sup>	14	3	8	3
% orgs. law and order	0.14	0.00	0.00	0.33
% orgs. economy	0.36	0.33	0.63	0.66
% orgs. social welfare	0.50	0.66	0.37	0.00
% central ministries	0.93	0.33	0.88	0.66
% agencies	0.07	0.66	0.12	0.33

NOTE:

<sup>a</sup> Only cases with membership score above 0.5 per configuration  
Coefficients range 0 - 1.

## *Discussion*

A technocratic approach to public management reform stresses the need for committing sizable resource endowments into efforts of reform. Building on an institutional framework (Nee 2005), we argued that there might be alternative pathways to compliant implementation for government agencies with small resource endowments. Our comparative study of 55 Mexican government agencies that underwent reform revealed the co-occurrence of both technocratic and institutional pathways to

compliant implementation. The common denominator across institutional configurations was the absence of large resource endowments combined with strong oppositional norms (weak patronage) and interpersonal trust (subordinates/supervisors generally trust each other).

Before discussing the implications of our findings, we need to acknowledge some limitations of this study. First, although grounded in theoretical and substantive knowledge, our study is limited to a broad framework on organizational-level influences on implementation. We aimed at understanding different comparable ways in which bundles of organizational characteristics affected organizational change in governmental organizations. However, emphasis on generic conditions also limited the attention paid in this study to more finely grained organizational factors that may affect compliant implementation (e.g., conflict and policy legitimation processes; see, Hill and Hupe 2002; Kelly 1994; Lipsky 1980). In addition, this study neglects inter-organizational influences and the role played by the enforcing ministry (see Chapter 3). Future studies can greatly benefit from conceptualizing and testing connections between these elements and their relation to technocratic and institutional pathways.

Second, our empirical study is limited to the case of the Mexican SPC reform. Although the availability of reliable and comparable data will likely be a problem, future research could benefit from comparing organizations implementing different reforms, in different or across politico-administrative systems. Third, our analysis focused on identifying causal configurations. An FSQCA methodology assisted us in systematically comparing cases and identifying recipes. However, this choice also implies that little can be said about the “net effect” of each separate condition. Future research designs could combine specific predictions for single conditions, a traditional net effects method (e.g., multivariate regression) and a configurational approach to produce additional insights.

Despite its limitations, this study and evidence distilled from the Mexican case provide interesting lessons. We discuss three of these by way of conclusion. First, the present study is among few public administration studies to compare a relatively large variety of public organizations of a national government that underwent public management reform. Our research design improves traditional SROS protocols. We collected information from multiple informants per organization and complemented it with independent, secondary data. This design produces more information and is also likely to reduce bias (cf. Enticott, Boyne and Walker 2009). This improvement shows that it is possible to compare intra-organizational characteristics of several public organizations systematically, using relatively efficient methods.

Second, this chapter shows (a) the configurational nature of technocratic and institutional recipes for implementation, and (b) their co-occurrence as possible pathways leading to compliant SPC implementation. It suggests that organizational-level conditions affecting compliant implementation (resource endowments, formal central control, normative beliefs, and implementers' interests) may be conceptualized and studied as complementary pieces of combinatorial mechanisms (pathways). In this sense, one of the lessons of this study is that factors, such as large resource endowments, are vital in relation to (theory-based) recipes or pathways. These allow us to appraise the importance of factors alleged to matter in implementation; but they also allow us to contextualize their explanatory value relative to other organizational characteristics. For instance, this study shows that, in the Mexican case, meager resource endowments contributed to compliant implementation, given a constellation of interpersonal trust, weak oppositional norms and alignment of implementers' interests. An advantage of this form of configurational thinking is that it allows for equifinality. Paying attention to the multiple pathways leading to compliant implementation is relevant for theories of implementation. It permits contextualization and assessment of different recipes—as opposed to

limiting the analysis to concrete ingredients. Further, this kind of analysis is also relevant for practitioners, who often must search for different ways of implementing policy reforms with or without limited resources.

For the SPC case, this study reveals that both technocratic and institutional recipes were potentially sufficient, if not necessary, explanations of compliant implementation. We do not mean to imply that the pathways studied here are enough to explain all instances of compliant implementation. Instead, we want to convey that this study reveals clues as to how and why investments in the form of large resource endowments matter or do not matter for compliant reform implementation. The study also reveals some contextual information suggesting that differences in organizational context/task may be related to different implementation pathways. For instance, organizations that operate under strong budgetary constraints and directly provide public services (such as social welfare organizations; see Table 4.1) succeeded in implementing the SPC reform to the extent that large financial endowments and central control over processes were available and implementers' interests were aligned to reform. In comparison, smaller agencies that regulate policy arenas but do not necessarily provide a wide range of direct public services (e.g., economic regulators) succeeded in implementing the SPC even though resources were limited, when subordinates and supervisors trusted each other, patronage norms were weak, and implementers' interests were aligned. Future studies could theorize on and empirically test this sort of contextual/task relations across different types of governmental organizations.

Finally, our findings stress the importance of normative beliefs and alignment of interests related to organizational change (see De Lancer Jules and Holzer 2001). This highlights some potential avenues of future research on implementation of organizational change in government, and in public management reform generally. First, management of intra-organizational norms and interpersonal trust could have a more prominent role

in the study of public management reform implementation than granted by traditional bureaucracy and public management theories. The idea that implementers need to “build internal support for change and overcome resistance” (Fernandez and Rainey 2006, 170) could be further specified and explored in future research.

On the one hand, very few studies look into strategies of cultural management in the public sector; in particular, on how public managers and reformers could emphasize, cultivate or build upon norms friendly to a given program of reform, or weaken or isolate oppositional norms (cf. Bate 1995). Our results echo also studies pointing at favorable effects of trust building (e.g., Lundin 2007). Implementation strategies that allow for active employee participation, empowerment, bilateral feedback on performance, and other antecedents of interpersonal trust (Nyhan 2000) could potentially increase the chances of compliant implementation in the public sector. On the other hand, future studies could look closer into if and how large resource endowments and financial incentives crowd out intrinsic motivation to implement change in governmental agencies (cf. Frey and Jegen 2001), as suggested by an interest-based institutional approach on public management reform implementation.