Necessary Conditions for Policy Integration and Administrative Coordination Reforms: An Exploratory Analysis

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Abstract

In this article, we explore the determinants of reforms intending to integrate policies and coordinate administrative units by focusing on necessary conditions. Firstly, we elaborate theoretical expectations about potential necessary conditions for cross-sectoral reforms. Secondly, we conduct a condition-oriented fuzzy-set qualitative comparative analysis to examine our expectations, based on an original data set comparing policy integration and administrative coordination reforms, in environmental and unemployment policy, across 13 countries over 29 years. Our results indicate three necessary conditions for high reform intensity: external problem pressure is necessary for policy integration and administrative coordination in employment policy; either the strength or weakness of the reference party can take the role of necessary conditions depending on the policy field; low politicization of bureaucracy is necessary, especially for administrative coordination in environmental policy. These findings contribute to the development of a systematic theory of cross-sectoral policy and administrative change.

1. Introduction

The integration and coordination of public policies and public sector organizations across and within policy fields constitute a major trend in contemporary policymaking. This tendency can be seen as a reaction to the fragmentation of political authority and the concomitant delegation of competencies away from the nation state: vertically, to subnational and supranational levels of governance (Hooghe and Marks 2016); as well as horizontally, to independent regulators and private actors (Maggetti 2009, 2012). This turn to multilevel governance rendered policymaking more demanding and limited the immediate room for maneuver of central governments especially in EU member states (e.g., Kohler-Koch and Rittberger 2006; Tosun and Hartung 2018). However, researchers have argued that delegation (Christensen and

Lægreid 2007; Dahlström et al. 2011) can ultimately lead to the reinforcement of central governments' steering capacity (Goetz 2008, 266-7, 271-2) as a reaction to the fragmentation of political authority. Another reason for the "reassertion of the center" of the nation state (Christensen et al. 2007) derives from new and complex policy challenges faced by governments (Christensen and Lægreid 2007), which cut across existing policy sectors and administrative structures. These challenges may stem from so-called wicked problems (Rittel and Webber 1973) that inherently require a multifaceted approach, such as those related to environmental protection (Jordan and Lenschow 2010). In other instances, such as unemployment policy, the nature of the policy problem evolved over time, ultimately requiring integrating and coordinating previously separated policy instruments (Champion and Bonoli 2011).

Abundant research examines specific instances of policy change brought by reforms that either span across different policy sectors (e.g., Jordan and Lenschow 2010), aim at coordinating public sector organizations that are relevant for these domains (e.g., 6 2004; Bouckaert et al. 2010; Peters 2015), or create new wide-ranging forms of cross-sectoral governance (e.g., Ansell and Gash 2008; Jochim and May 2010; Varone et al. 2013; Fischer and Maag 2019). Recent reviews (Cejudo and Michel 2017; Tosun and Lang 2017; Trein et al. 2019; Trein et al. 2020) have nonetheless documented a certain lack of cumulativeness and cross-fertilization within this literature, which focuses predominantly on case studies, and often takes either a policy-oriented or an organization-oriented approach. Thus, there is a need for comparative research, which works towards systematizing factors explaining such reforms.

Against this background, this article contributes to theory-building about policy integration (PI) and administrative coordination (AC) reforms. *Firstly*, we put forward a conceptual distinction between PI and AC reforms as two dimensions of reforms cutting across policy sectors. *Secondly*, we propose potential necessary conditions for such reforms, combining general theories of the policy process (e.g., Weible and Sabatier 2018) with insights

from the literature on policy integration and coordination (e.g., Jordan and Schout 2006; Peters 2015) and comparative politics (e.g. Tsebelis 2002). Necessary conditions frequently form the building blocks of theories and hypotheses in political science (Braumoeller and Goertz 2000; Goertz 2003). They provide unique and distinctive insights on the enabling factors for an empirical phenomenon – independently from the analysis of sufficient conditions (Dul 2016); and they are particularly appropriate for our macro-level exploratory approach, which requires a partially inductive research strategy (Yom 2015). *Thirdly*, to investigate necessary conditions for PI and for AC reforms empirically, we perform a condition-oriented fuzzy-set qualitative comparative analysis (fsQCA) (Thomann and Maggetti 2019; Ragin 2008b). We use an original data set that covers substantial reform instances of PI and AC in environmental and unemployment policy, comparing Austria, Australia, Belgium, Canada, France, Germany, Italy, the Netherlands, New Zealand, Sweden, Switzerland, the UK, and the US from 1985 to 2014.

Our results suggest that factors concerning the policy problem at stake—notably external problem pressure—and politics-related factors—such as party politics and the politicization of the bureaucracy—are necessary conditions for a high intensity of PI and AC reforms. Nonetheless, the effect of these conditions varies between the two reform types and, above all, across the two policy fields, lending weight to the idea that cross-sectoral reforms are enabled by policy-specific pathways. These findings imply that future research on PI and AC should consider problem pressure, policy agendas of political parties, and the politicization of bureaucracies as crucial conditions for such reforms that deserve to be included in a systematic explanatory model. More generally, we illustrate the relevance of focusing on necessary conditions (Goertz and Starr 2003) for the exploratory study of policy reforms.

2. Policy integration and administrative coordination

As anticipated, to analyze reforms that cut across existing policy sectors, we distinguish between *policy integration* and *administrative coordination*. The classical approach to the analysis of policy coordination relies on scales that range from administrative to policy and strategic coordination (Jordan and Schout 2006; Braun 2008, 231-2). Recent contributions suggest, however, that the policy and administrative dimensions should be considered separately concerning the analysis of cross-cutting policy issues (Cejudo and Michel 2017; Tosun and Lang 2017; Trein 2017). We follow this analytical distinction as policymakers might initially put into place policy strategies that integrate policy goals in different sectors. However, the administrative structures in charge might prove difficult to reform, especially when it comes to merging services and cutting personnel and expenditure (Pierson 1998, 552-3). Further, new administrative layers may precede the creation of policy instruments or even be established without any other goal than performing a symbolic function (Christensen and Lægreid 2003). Finally, PI and AC reforms, albeit somewhat related, do not necessarily follow the same logic, as the former establish policy contents, while the latter account for the implementation process (Rayner and Howlett 2009).

More specifically, the concept of *policy integration* denotes specific cross-cutting policy measures and instruments that aim at achieving broader or composite policy objectives that could not be achieved unilaterally within each policy sector alone (Candel and Biesbroek 2016, 211-2; Jochim and May 2010), such as in environmental policy (Jordan and Lenschow 2010), or social policy (Bonoli and Champion 2011). The use of PI instruments is particularly relevant regarding novel policy ideas that require comprehensive policy solutions (Peters 2015, 4). Specific empirical instances of PI are legislative changes that connect or combine existing laws, changes in the mix of policy instruments, or new political strategies that embody future visions or plans that clearly link various policy sectors. Thus we examine reforms that formally integrate public policies.

Administrative coordination refers to reforms changing the relationship between different organizational units that elaborate and implement policies in the sense of improving their interaction and cooperation (Christensen and Lægreid 2007, 1059-60), such as dialogues, consultations, and negotiations (6 2004, 108-9; Trein 2017). Stronger forms of coordination correspond to mergers of organizations that are responsible for different policy issues. Weaker forms of coordination consist in procedures that help avoiding negative spill-overs between policies, such as impact assessments or the co-signing of legislative proposals (6 2004, 108). Our study mostly concerns these lighter forms of AC, since reforms that actually merge administrative units from a range of policy sectors into a new agency are rare (Jochim and May 2010).

To analyze these conceptual distinctions, we focus on the diverse cases of environmental and unemployment policy. In these policy fields, policymakers use indeed PI and AC instruments in different ways. In the case of environmental policy, integration consists of the technically complex incorporation of environmental protection concerns across policy fields (Jordan and Schout 2006, 14; Trein and Maggetti 2020, 200) such as transport, energy, and land-use policy (Lenschow 2002; Jordan and Lenschow 2008). In the field of unemployment policy, cross-sectoral reforms occur within the larger policy field and proceed according to a technically much less complex approach than in environmental policy (Trein and Maggetti 2020, 200). Specifically, policymakers have reformed unemployment policy by integrating and coordinating cash transfers, such as unemployment benefits, with services aiming to activate unemployed persons, for example training courses. Reforms often accomplish this goal by making benefit receipt conditional on the participation in activation measures (Champion and Bonoli 2011).

3. Moving towards an explanation for policy integration and administrative coordination reforms

We contribute to theory development regarding PI and AC reforms through an exploration of necessary conditions. Firstly, we formulate general expectations based on theories of the policy process (e.g., Weible and Sabatier 2018). Secondly, we propose specific conditions using insights from the policy integration and coordination literature (e.g., Jordan and Schout 2006; Peters 2015; Trein et al. 2019; Molenveld et al. 2020). We organize these expectations and conditions according to the distinction between (1) policy problems and instruments, (2) political institutions, and (3) politics (Varone et al. 2005).

As mentioned in the introduction, necessary conditions form a core part of political science theories, and many classics of political research center on them (Goertz and Starr 2003). The analysis of necessary conditions provides scholars and policymakers with crucial insights about the indispensable factors that facilitate or enable a phenomenon of interest. In that regard, this type of analysis is particularly appropriate for the exploratory study of the building blocks of a cross-sectoral policy reform theory, grounded on general theories of the policy process. It is important to remind that statements about "necessary but not sufficient" causality (Dul 2016) are *per se* relevant, independently of the analysis of sufficient conditions; and that they are identifiable via an established methodology grounded in set-theoretic methods (Braumoeller and Goertz 2000). This approach does not require the formulation of directed expectations about sufficient conditions, which focus on the proximate determinants of reforms.

3.1 Expectation and conditions related to policy problems

Our first expectation takes seriously the insight that policy problems and their solutions may be decoupled. For example, the multiple streams framework directly draws on the "garbage can" model (Cohen et al. 1972) by assuming that the identification of a problem, the development of

a solution, and its application are "relatively independent streams" (Herweg et al. 2018, 39). Following the advocacy coalition approach, policy problems are not independent from policy beliefs and typically require external shocks to trigger policy change (Jenkins-Smith et al. 2018). According to punctuated equilibrium theory, policymakers' attention to problems is selective and disproportional (Baumgartner et al. 2018).

This does not imply that all reforms go through this type of process, whereby "solutions are actively looking for problems." Instead, it is important to "distinguish situations in which organizations may be susceptible to deliberate willful reorganization from situations in which the process of change more clearly resembles a garbage can process" (March and Olsen 1986, 25). It is worth noting that "weakly institutionalized processes, such as comprehensive administrative reforms, are more likely to have garbage can properties than are more institutionalized processes" (Olsen 2001, 195-6). The likelihood for a garbage can process to occur increases with the degree of ambiguity and uncertainty decision-makers face concerning a specific policy problem (Zahariadis 2016). This is the case of environmental policy, whereby the issues at stake are considered highly technically complex and spanning across several policy sectors (cf. Jordan and Schout 2006, 14; Heal and Millner 2018; Trein and Maggetti 2020).

Contrariwise, policy reforms that tackle policy issues with low ambiguity and uncertainty should be more problem-driven, i.e. the solution should follow the problem. Accordingly, we expect that problem-related conditions might be necessary for PI and AC reforms that occur within one larger policy field and exhibit less technical complexity, such as unemployment policies. Therefore, we formulate the following expectation:

Expectation 1: Conditions related to policy problems may be necessary for a high intensity of PI and AC reforms when ambiguity and uncertainty are relatively low.

This expectation applies to both PI and AC reforms. In the following, we propose three potentially necessary problem-related conditions for operationalizing this expectation, using

insights from previous research on policy coordination and integration as well as the general public policy literature (cf. Online Appendix for more details).

1. *External problem pressure (C1):* External and "objective" problem pressure, for example greenhouse gas emissions (Fukasaku 1995, 1064; Runhaar et al. 2014), and unemployment rates or poverty (Cejudo and Michel 2017; Champion and Bonoli 2011, 325) could be a necessary condition for PI and AC reforms.

2. *Internal problem pressure (C2):* Reform pressures may also emerge endogenously within a given policy (Starke 2006). High costs of unemployment policies (Wagschal and Wenzelburger 2008) may be necessary for PI and AC reforms. Similarly, the absence of strict environmental legislation (Botta and Koźluk 2014) could be necessary for PI and AC reforms.

3. *Prior reforms (C3):* Learning from previous (t-1) experiences (positive or negative) (Gilardi et al. 2009) with PI and AC reforms could be necessary conditions for more or less PI and AC reforms.

3.2 Expectation and conditions related to the polity

Our second expectation relates to the role of institutions as enabling or constraining factors (John 2012). According to the multiple streams framework, institutions durably structure the decision-making process and shape the coupling of the streams (Béland and Howlett 2016). The advocacy coalition approach has a limited view on the role of institutions; nonetheless, they are considered to work as filters in the process of converting policy beliefs into policy outputs (Jenkins-Smith et al. 2018). According to the punctuated equilibrium theory, institutional rigidities delay and restrain policy responses, creating "frictions" that eventually lead to punctuations and policy change (Baumgartner et al. 2018). Likewise, it is plausible that institutional constraints limit PI and AC, as vested interests will oppose coordination and integration efforts that constrain their autonomy (Jordan and Lenschow 2010). Against this

background, we formulate the following general expectation about the impact of institutions concerning PI and AC reforms:

Expectation 2: The absence of strong institutional constraints may be necessary for a high intensity of PI and AC reforms.

This expectation can be operationalized by combining these general insights with the literature on policy integration, according to which institutional factors determine coordination capacity. In addition to the impact of general institutional constraints, the devolution of capacities to lower levels of government and the creation of decentralized agencies could create a situation of fragmented political authority that requires governments to engage in PI and AC reforms (Peters 2015, 32,5-7; Jordan and Schout 2006; Molenveld et al. 2020). Against this background, we formulate the following potentially necessary conditions (cf. Online Appendix for more details):

1. **General institutional constraints (C4):** The absence of a high number of distant veto points (Tsebelis 2002) could be a necessary condition for PI and AC reforms (Jordan and Schout 2006; Lenschow and Jordan 2010).

2. **Authority of subnational jurisdictions (C5):** A low level of regional authority could be a necessary condition for a high intensity of PI and AC reforms (Hull 2008, 101; Egeberg and Trondal 2016, 580).

3. **Prior delegation of authority (C6):** The presence of regulatory agencies can be a necessary condition for PI and AC reforms (Maggetti 2012).

3.2 Expectation and conditions related to politics

The third expectation concerns the politics dimension. Following the multiple streams approach, politics-related developments within the political stream may contribute to open a "window of opportunity" that allows policy entrepreneurs to influence the policy process (Kingdon 1995). Politics lies at the core of the mechanics of the advocacy coalition framework,

whereby political actors interact within coalitions to translate their beliefs into policies (Weible 2006), for example under the impulsion of policy entrepreneurs (Mintrom and Vergari 1996). Punctuated equilibrium theory also refers to policy entrepreneurs as actors that are crucial in the policy process, especially when they are able to define issues and can thereby shape policy outputs according to their preferences (Baumgartner and Jones 2009). Therefore, we propose the following expectation.

Expectation 3: The presence of strong policy entrepreneurs supporting the reform, and the absence of strong policy entrepreneurs opposing the reform, may constitute necessary conditions for a high intensity of PI and AC reforms.

How could a policy entrepreneur shape PI and AC reforms? Research claims that the political goals of interest groups and bureaucrats can hinder integration and coordination, whereas political parties might embrace such reforms to pursue their policy goals (e.g., Nilsson 2005; Peters 2015, 35-7; Persson et al. 201;Faling et al. 2019). Thereby, we the propose to operationalize this expectation with the following potentially necessary conditions, which combine general insights from the comparative politics literature with specific arguments from PI and AC research (cf. Online Appendix for more details):

1. **Parties (issue-related) (C7):** A strong reference party can be a necessary condition for PI and AC reforms, when PI and AC in the relevant policy field is an important policy goal. In our case these are green parties (Nilsson 2005, 218-9; Persson et al. 2016), and left-wing, notably social-democratic parties (Rueda 2006; Giddens 2008; Knotz and Lindvall 2015).

2. **Politicization of bureaucracy (C8):** A low politicization of bureaucracy could be necessary for high reform intensity regarding PI and AC. If bureaucrats are politically appointed instead of selected according to their professional skills, they are more likely to resist PI and AC reforms because politicized bureaucracies come along with limited

steering capacity of the head of government over politico-administrative personnel (Catalano et al. 2015; Painter and Peters 2010, 20-2; Peters 2015, 37-9).

3. **Interest group inclusion (C9):** A low degree of interest group corporatism could be necessary for a high PI and AC reform intensity as interest groups have more systematic access to defend their special interests and to block reforms that cut across different policy goals and instruments as well as administrative units (Lijphart 2012).

Due to the conceptual distinction and different logics of PI and AC (Section 2), it is plausible to expect a potential discrepancy between the two outcomes. The specificities of these patterns are expected to emerge inductively from the analysis, in line with our exploratory approach aiming at theory building. Therefore, we add a corollary to the abovementioned expectations:

Corollary: Necessary conditions for a high intensity of reforms may vary between PI and AC reforms.

4. Designing an empirical test of necessary conditions

In the following, we present the most important elements regarding data collection and operationalization (a detailed discussion can be found in the online supplementary materials). Furthermore, we discuss the methodological approach we applied for the study of the above-mentioned expectations for necessary conditions using condition-oriented fsQCA.

4.1 Data and operationalization

Our analysis relies on a new and original data set that measures formal PI and AC reforms in thirteen countries: Australia, Austria, Belgium, Canada, France, Germany, Italy, the Netherlands, New Zealand, Sweden, Switzerland, the UK, and the US. The analysis focuses on environmental and unemployment policy between 1985 and 2014. We compare environmental

and unemployment policy as they differ regarding the scope of integration and coordination reforms. In the case of environmental policy, PI and AC reforms span across other policy fields from a high-level perspective (Jordan and Schout 2006; Trein and Maggetti 2020). Conversely, in the field of unemployment policy, PI and AC reforms occur within a single policy field (Champion and Bonoli 2011; Trein and Maggetti 2020).

Regarding *PI*, our observations consist of formal policy reforms designed and decided to attain a specific integration objective. They correspond for instance to national strategies, action plans, or (framework) legislation integrating policies in a specific way for a given policy domain. To assess *AC*, our empirical observations are occurrences of statutory reforms that increase the coordination between different administrative units or create new units for coordination. These are, for instance, reforms creating transversal bodies, such as councils or working groups, that augment inter-ministerial policy coordination, as well as reorganizations that integrate portfolios at ministerial, agency, or public service level (see our supplementary materials for details). We code an ordinal measure of reform intensity in a multilevel time series data set structure with three time periods: 1985-1995 (t1), 1996-2005 (t2), and 2006-2014 (t3), which allows us to check for temporal effects.

Regarding the operationalization of the potentially necessary conditions, we use mean values for each period from the following measurements: (C1) greenhouse gas emissions and unemployment rates; (C2) expenditure for active and passive labor market policies and stringency of environmental policy; (C3) reform activity in the previous time (missing for t1); (C4) data set on political constraints; (C5) regional self-rule; age of regulatory independent agency (Environment and Work Safety); (C7) share of seats in parliament of the main left-wing and green parties; (C8) index on the politicization of the bureaucracy based on administrative traditions; and (C9) Lijphart's index on interest group pluralism. As usual, the operationalization of conditions entails a compromise between validity and parsimony on the

one hand, and data availability, as well as feasibility of data collection, on the other (cf. Supplementary Materials for sources).

4.2 The methodology of necessary conditions

In our analysis, we focus on necessary conditions. Necessary conditions are "important causes" that directly imply a counterfactual (Goertz and Levy 2007). They correspond to conditions that must be present for a given outcome to occur —in our case, a high reform intensity concerning PI and AC. However, their presence does not guarantee the occurrence of this outcome, as they are "asymmetrical causes" (Ragin 2008b). In other words, they are indispensable (but insufficient) enabling factors for the occurrence of the outcome. They play a specific role in causal analysis, insofar as they provide crucial insights on the scope and the limits of causal propositions. Necessary conditions have been used widely to theorize causal relationships in many influential studies in political science and related disciplines (Goertz and Starr 2003). Trivial and non-trivial necessary conditions are worth distinguishing (Goertz 2006). Trivial necessary conditions have the formal properties of necessary conditions but provide very little analytical leverage and should be dismissed. Non-trivial necessary conditions are analytically relevant because their absence in the universe of positive and negative cases under examination is theoretically possible and empirically quite frequent. In our analysis, the conditions under investigation are non-trivial as they display considerable variation across cases, i.e. they are not "always present" (cf. Table A2 in the supplementary materials).

Fuzzy-set qualitative comparative analysis (fsQCA) provides an appropriate analytical framework for examining necessary conditions through the investigation of subset relationships. Accordingly, a condition is necessary for an outcome if the outcome is a subset of this condition (Ragin 2008a). This operationalizes the argument that no instances of this outcome occur without the condition being present. The key criterion to evaluate the necessity of a condition is the consistency of the set relationship, a parameter that assesses the degree to

which each instance of the outcome agrees in displaying the condition that is expected to be necessary (Ragin 2006). A widely used benchmark for the consistency threshold is 0.90 (Rihoux and Ragin 2009, 109-21). The second criterion is coverage, a measure that assesses the empirical relevance of the condition; that is, the extent to which instances of the condition correspond to instances of the outcome (Ragin 2006). Unlike the former, coverage is a descriptive measure that does not require meeting specific thresholds. The software package fsQCA 3.0 (Ragin et al. 2006/2019) contains a procedure to analyze necessary conditions. It implements the abovementioned arguments and provides consistency and coverage values for individual conditions that are deemed to be necessary for an outcome. Our approach to QCA is exploratory, partially inductive and "condition-oriented" (Thomann and Maggetti 2019). Instead of emphasizing in-depth case knowledge, we are mainly interested in patterns across cases, in line with our research goals (see also: Greckhamer et al. 2013; Fiss et al. 2013; Cooper and Glaesser 2016). Nevertheless, we also provide some case-centered illustrations to connect our condition-related findings with specific empirical cases (Schneider and Wagemann 2010).

5. Necessary conditions for policy integration and administrative coordination

We ran several analyses with the package fsQCA 3.0 based on three slightly different specifications of the outcome conditions. We varied the restrictiveness of the calibration across the two outcome conditions (PI and AC) and for each of the two policy fields (environmental policy and unemployment policy) to ensure robustness. Table 1 and Table 2 report consistent necessary conditions for the two outcomes; that is, high reform intensity with respect to PI and AC. Conditions are necessary if they have a consistency score above the standard benchmark of 0.90. We have also reported the (few) "barely inconsistent" ones; that is, those with a

consistency score of 0.88 or 0.89. We estimate three models using different anchorage points for both outcomes.[1]

Table 1. Outcome: High reform intensity with respect to PI

Conditions		Outcome					
		(Model 1)		(Model 2)		(Model 3)	
		EP	EMP	EP	EMP	EP	EMP
1	*High ext. problem pressure*	0.64	**0.99**	0.59	**0.98**	0.54	**0.92**
		(0.59)	**(0.38)**	(0.70)	**(0.49)**	(0.81)	**(0.62)**
2	*High int. problem pressure*	0.70	0.80	0.67	0.76	0.64	0.72
		(0.55)	(0.50)	(0.75)	(0.61)	(0.82)	(0.75)
3	*Few political constraints*	0.70	0.67	0.66	0.65	0.61	0.64
		(0.57)	(0.43)	(0.69)	(0.54)	(0.81)	(0.69)
4	*Short prior delegation period*	0.77	0.78	0.73	0.74	0.70	0.72
		(0.48)	(0.39)	(0.58)	(0.48)	(o.71)	(0.61)
5	*Low level of regional authority*	0.75	0.72	0.70	0.69	0.65	0.66
		(0.58)	(0.44)	(0.69)	(0.55)	(0.81)	(0.68)
6	*Low politic. of bureaucracy*	**0.90**	**0.92**	0.86	**0.89**	0.83	0.87
		(0.50)	**(0.41)**	(0.61)	**(0.51)**	(0.75)	(0.64)
7	*High prior degree of pol.int.*	0.67	0.60	0.62	0.58	0.60	0.55
		(0.51)	(0.48)	(0.60)	(0.60)	(0.39)	(0.73)
8	*High prior degree of adm. coord.*	0.79	0.56	0.73	0.53	0.69	0.47
		(0.54)	(0.66)	(0.63)	(0.80)	(0.76)	(0.93)
9	*Strength of reference party*	0.30	**0.96**	0.25	**0.95**	0.20	**0.93**
		(0.94)	**(0.41)**	(0.98	**(0.52)**	(0.99)	**(0.66)**
10	*Weakness of reference party*	**0.99**	0.50	**0.99**	0.42	**0.98**	0.36
		(0.42)	(0.50)	**(0.53)**	(0.54)	**(0.68)**	(0.61)
11	*Low interest groups pluralism*	0.71	0.76	0.68	0.74	0.66	0.71
		(0.51	(0.43)	(0.62)	(0.54)	(0.77)	(0.67)

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[1] Our tables present consistency scores for the necessary conditions. The numbers reported in parentheses are coverage scores. For both outcomes, Model (1) is calibrated on the anchorage points 8-4-0; Model (2) is calibrated on the anchorage points 8-3-0; and Model (3) is calibrated on the anchorage points 8-2-0. For both outcomes, the following conditions are calibrated on the following anchorage points: (1) 9.6-4-0.1; (2) 4.2-1.7-0.5; (3) 0.68-0.82-0.89; (4) 0-15-46; (5) 7-17-25; (6) 1-2-3; (7) 11-7-2; (8) 11-6-1; (9) 46-15.5-0; (10) 0-15.5-46; and (11) 0.4-2-3.2. Condition 12 is dichotomous (1/0). EP = Environmental policy; EMP = Employment policy. Dark gray cells indicate consistent scores; that is, those above 0.90. Light gray cells indicate "barely inconsistent" scores of 0.88 or 0.89. See our supplementary materials for the descriptive statistics and raw data of the conditions.

The results show that policy- and politics-related factors can take the role of necessary conditions. Precisely, "high external problem pressure" is strongly and systematically consistent with an argument of necessity in unemployment policy for the outcome of high reform intensity concerning PI and AC. The condition "low politicization of bureaucracy" is mostly consistent with an argument of necessity in both policy fields for reforms concerning PI, while it is more strongly and more systematically consistent only in the environmental sector for reforms of AC (Table 1, Table 2).

Table 2. Outcome: High reform intensity with respect to AC

Conditions		Outcome					
		(Model 1)		(Model 2)		(Model 3)	
		EP	EMP	EP	EMP	EP	EMP
1	*High ext. problem pressure*	0.74	**0.99**	0.64	**0.99**	0.57	**0.96**
		(0.59)	**(0.24)**	(0.66)	**(0.32)**	(0.73)	**(0.44)**
2	*High int. problem pressure*	0.65	0.76	0.64	0.73	0.63	0.69
		(0.44)	(0.30)	(0.56)	(0.37)	(0.68)	(0.51)
3	*Few political constraints*	0.69	0.81	0.66	0.76	0.64	0.67
		(0.48)	(0.33)	(0.59)	(0.41)	(0.72)	(0.52)
4	*Short prior delegation period*	0.86	0.85	0.82	0.78	0.79	0.69
		(0.46)	(0.26)	(0.57)	(0.32)	(0.68)	(0.40)
5	*Low level of regional authority*	0.85	0.72	0.80	0.73	0.73	0.70
		(0.56)	(0.28)	(0.68)	(0.37)	(0.77)	(0.51)
6	*Low politic. of bureaucracy*	**0.97**	0.81	**0.93**	0.84	**0.88**	0.87
		(0.46)	(0.22)	**(0.57)**	(0.31)	**(0.77)**	(0.45)
7	*High prior degree of pol.int.*	0.60	0.71	0.57	0.62	0.53	0.53
		(0.39)	(0.35)	(0.47)	(0.41)	(0.55)	(0.50)
8	*High prior degree of adm. coord.*	0.70	0.62	0.67	0.54	0.63	0.47
		(0.41)	(0.46)	(0.50)	(0.53)	(0.59)	(0.66)
9	*Strength of reference party*	0.32	**0.90**	0.25	**0.89**	0.21	**0.89**
		(0.85)	**(0.24)**	(0.86)	**(0.31)**	(0.87)	**(0.45)**
10	*Weakness of reference party*	**0.99**	0.68	**0.99**	0.62	**0.99**	0.55
		(0.36)	(0.43)	**(0.46)**	(0.51)	**(0.57)**	(0.66)
11	*Low interest groups pluralism*	0.75	0.81	0.73	0.76	0.71	0.72
		(0.46)	(0.29)	(0.58)	(0.35)	(0.69)	(0.48)

The condition "strength of reference party" is strongly and quite steadily consistent with an argument of necessity in unemployment policy for both outcomes. Similarly, the condition "weakness of reference party" is strongly and systematically consistent with an argument of necessity in environmental policy for the outcome related to PI and for the outcome related to AC (Table 1, Table 2).

6. Discussion

The results of our empirical analysis indicate that the type of policy problem as well as conditions related to politics can be necessary conditions for a high intensity of PI and AC reforms. External problem pressure is a necessary condition for a high reform intensity when the policy problem as well as the possible solutions are clearly identifiable and PI and AC reforms deploy within the larger policy field (Trein and Maggetti 2020), such as for unemployment policy. Conversely, when problem ambiguity and uncertainty are strong (Heal and Millner 2018), and PI and AC take place across several policy fields (Jordan and Schout 2006), external problem pressure is not a necessary condition. This is the case of environmental protection. In this instance, we found no direct link between the policy problem and the intensity of reforms. We rather observe a "garbage can-like", i.e., coincidental, connection between them. This finding confirms that the impact of policy problems on the occurrence of cross-sectoral reforms varies between policy fields (Baumgartner et al. 2018; Herweg et al. 2018; Jenkins-Smith et al. 2018).

The French case offers an illustration of this point. During the period 1998-2005, high sector-specific problem pressure in the policy field, i.e., a high unemployment rate, coincided with many PI reforms during the same period. Contrariwise, there were many PI reforms regarding environmental policy but the sector-specific problem pressure – in this case greenhouse gas emissions – was comparatively lower. Similarly, from 2006 to 2014, Italian governments passed many reforms changing AC regarding unemployment policy, following a

higher unemployment rate. Yet, during the same period, in the Netherlands, we find many AC reforms in environmental policy against a background of comparatively lower problem pressure.

Figure 2: Summary of results of the analysis of necessary conditions
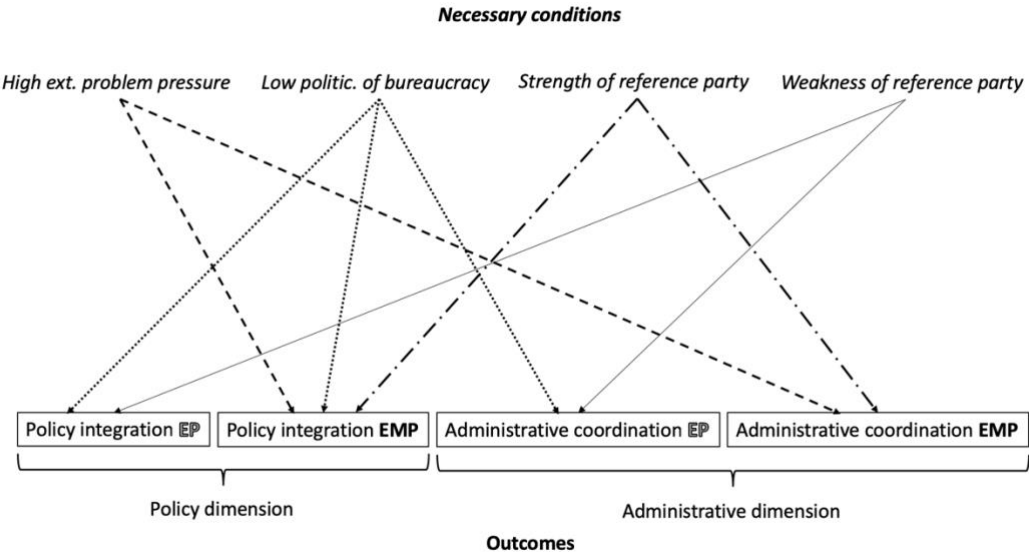
Politics-related conditions can also take the role of necessary conditions for a high intensity of PI and AC reforms. First, a low politicization of bureaucracy tends to constitute a necessary condition for a high intensity of reforms that change the formal relationship between administrative units, especially in environmental policy. Put differently, if the bureaucracy is not decisively influenced by political parties and by conflicts among them (which could reduce the steering capacity of the head of government over ministries and administrative organizations), then it becomes possible to observe more PI and AC reforms. Otherwise, the government would face political resistance against integrating new policy goals across policy sectors and public administrations. This finding implies that governments are able to pass cross-sectoral reforms especially when bureaucracies are not controlled by a logic of partisan competition.

The case of Australia is an instance where a low politicization of the bureaucracy, i.e., limited partisan capture of the civil service, comes along with many reforms regarding PI and AC in environmental policy, especially during the period 1996-2005. Similarly, in the UK many unemployment-related PI reforms occurred against the background of a weakly politicized bureaucracy during the periods 1996-2005 and 2006-2014. Contrariwise, the presence of a politicized bureaucracy in Italy coincides with a lower aggregate number of reforms in both sectors during the full period investigated in our study.

Second, conditions related to the strength of political parties appear as necessary for the high intensity of PI and AC reforms. However, their direction differs between the two policy domains, partially supporting our third expectation and the corollary. A strong reference party seems necessary for intense reforms in unemployment policy, such as in the case of the New Labour Party in the UK. Likewise, many PI reforms regarding unemployment policy occurred in Germany between 1996 and 2005 under a strong left party (where the Social Democrats led a coalition government with the Greens after 1998).

Social democratic parties have aimed to gear these reforms toward social investment and to pursue a rather social–liberal approach to unemployment policy that combines benefits and activation measures (Knotz and Lindvall 2015). Nevertheless, reforms integrating benefits and activation measures (which represent the key element of PI and AC reform in this field) have been criticized for putting the unemployed under pressure (Morel et al. 2012). The PI and AC unemployment reforms enacted in the UK by the Tory-LibDem coalition government after 2010 (under austerity policy) tend to fall into this latter category (Wiggan 2012).

Contrariwise, a weak reference party appears to be a necessary condition for a high intensity of reforms regarding PI and AC in the case of environmental policy. One example for this case is Sweden: the comparatively weak reference (green) party was instrumental for a high level of PI reforms during the period from 1996-2005.

This finding is quite surprising but complements rather than contradicts previous research (Persson et al. 2016). It indicates that when green parties are weaker, mainstream parties tend to make environmental PI a political priority and combine it with other policy issues on their agenda, such as the New Labour Party did in the UK. More generally, this finding suggests that if reference parties are niche parties (such as green parties in our study) (Abou-Chadi 2016) that are represented in parliament, a cross-sectoral approach is less likely than more targeted sector-specific reforms. Contrariwise, if the reference party is mainstream and acquires the role of a politically strong policy entrepreneur (Baumgartner and Jones 2009), as for instance in the case of social democratic center-left parties in the 1990s, these reference parties tend to push for broader cross-sectoral policy reforms.

7. Conclusions

In this article, we examined necessary conditions for a high intensity of policy integration (PI) and administrative coordination (AC) reforms. These reforms can be seen as a reaction to the delegation of political authority towards international, subnational, independent, and private actors (e.g., Hooghe and Marks 2003), which has prompted a reaction towards the reassertion of the central government (e.g., Christensen et al. 2007; Goetz 2008). At the same time, they represent a response to the growing complexity of policy problems (Christensen and Lægreid 2007).

The article contributes to the literature in the following ways. First, it puts forward an analytical distinction between policy-oriented, i.e., *PI*, and organization-oriented reforms, i.e., *AC*, as two related but distinctive dimensions of cross-sectoral reforms. Second, we propose potentially necessary conditions for a high intensity of PI and AC reforms, by combining general theories of the policy process with specific insights about cross-sectoral reforms. Third, by applying condition-oriented fuzzy-set QCA, we show that external problem pressure is a necessary condition only when PI and AC reforms tackle a problem with limited ambiguity and

uncertainty and in policy domains where such reforms occur within the larger policy field. Fourth, our results indicate that policy entrepreneurs from mainstream political parties, such as social democratic parties, and the presence of "depoliticized" bureaucrats, are necessary for observing a high reform intensity. Contrariwise, the absence of strong policy entrepreneurs from smaller parties, i.e. green parties in our study, appears to be necessary for a high intensity of cross-sectoral reforms regarding environmental policy. Finally, the analysis does not show that specific institutional conditions are strictly necessary for a high intensity of reforms concerning PI and AC.

From a more general point of view, we contribute to the public policy literature by explicitly conceptualizing and operationalizing potential necessary conditions for comparative policy analysis. In short, these are distal causes that are indispensable for policy reforms but do not guarantee that they occur. Necessary conditions are crucial elements of policy theories and particularly well-suited for exploratory research and theory-building purposes. Therefore, they are important building blocks for developing a mechanistic understanding of public policy (Capano and Howlett 2019) and more specifically for PI and AC (Biesbroek and Candel 2019).

Our analysis opens avenues for further research in this area. Notably, the conceptualization and operationalization of policy problems, i.e., external problem pressure, need more theoretical refinement and empirical work. Future scholarship should clarify the specific role policy problems play in cross-sectoral reforms, namely to improve our understanding of the scope conditions under which they do matter or not. This line of research is particularly important for extremely complex policy problems, such as environmental protection and climate change. The role of policy entrepreneurs, especially of reference parties – those claiming or seeking issue ownership on the policy at stake – deserves further attention. The scope conditions under which these actors push for PI and AC, or rather pursue a more targeted sectoral strategy, needs to be studied more comprehensively. Furthermore, additional in-depth case study research would be welcome to examine whether high reform activity is

ultimately instrumental for solving the problems at stake or whether these cross-sectoral reforms mostly serve the strategic interests of policymakers to demonstrate their activism in dealing with pressing policy challenges.

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