Original Research

Instruments for Policy Integration: How Policy Mixes Work Together

Guillermo M. Cejudo¹ and Cynthia L. Michel¹

Abstract
To effectively address complex problems, different policy instruments must be integrated into policy mixes. A crucial task for the policymaker is to identify the set of instruments to be deployed and to integrate them into a policy mix. However, policy instruments not only need to be coherent in their design; their implementation also requires instruments that create interdependence and preserve the integrated logic of the policy mix over time. In this paper we identify the instruments that make integration work. We argue that for policy mixes to solve complex problems, instruments that secure the continued interaction of its components are needed. We show that three instruments serve this purpose: a policy frame, authority, and information. We use three cases where governments have attempted to solve complex problems through policy integration to illustrate our argument. With this paper, we advance our understanding of how integration works and, by doing so, we inform decision-makers about the specific policy tools necessary to achieve it.

Keywords
policy integration, policy mix, policy design, policy instruments, comparative public policy

Introduction

Solving complex problems is one of the most important challenges for public policy and administration today. To effectively address them, different policy instruments must be integrated into policy mixes that deal with the different dimensions of the problem. A crucial task for the policymaker is to identify the set of instruments to be deployed and to integrate them into a policy mix (Kern & Howlett, 2009). However, policy instruments not only need to be coherent in their design (to avoid clashes between them and to take advantage of their potential complementarities) and coordinated in their implementation across all the agencies involved. It is necessary to preserve those attributes over time—that is, to keep them integrated.

We argue that for policy mixes to solve complex problems, it is not just a question of guaranteeing certain design and operational attributes of the components of the policy mix; the elements of the policy mix must interact. Thus, instruments that secure this interaction are needed to achieve policy integration. We identify three such instruments: first, a policy frame that sets a shared understanding of the problem being addressed by the policy mix; second, the authority for a decision-maker to make the necessary adjustments to ensure the policy mix remains pertinent and relevant and functions as planned over time; and finally, the production and utilization of information regarding the attributes of the tools within the mix. These instruments make interdependency among policy tools unavoidable and thus enable policy integration.

We contribute to the literature on policy mixes and policy integration in two ways: first, by identifying the elements that bind together the instruments that make up a policy mix; and second, by identifying the “micro-management tools and their effects on macro-regime characteristics” (Tosun & Lang, 2017, p. 562; see also Trein et al., 2021), and thus showing the interplay between the institutional and policy components of the policy integration process. Moreover, we extend the comparative scope of the literature on policy integration by using existing case studies to analyze the performance of these elements in different sectors and countries.

For this analysis, we use the recent literature on policy instruments, policy mixes, and policy integration. We understand policy integration as a process that requires articulating a set of policy instruments. Based on previous analyses on food policy in South Africa (Candel, 2018), child care in Chile (Molina et al., 2018), and social inclusion in Australia (Carey, Crummard, & Riley, 2015; Carey, McLoughlin, &...
Dealing With Complex Problems Requires Multiple Instruments

Policy instruments are specific tools that governments employ to attain a policy objective. Sometimes these instruments are combined to deal with problems that require more than one intervention. When more than one instrument is used to achieve a policy objective, the literature refers to this set of instruments as “policy packages” (Givoni, 2014) or “policy mixes” (Kern & Howlett, 2009). Adding policies not only creates a combination of different types of instruments but a governance strategy aimed at attaining certain policy objectives (see Howlett & Rayner, 2007; Salamon, 2002).

Since policy instruments must work together, like mixes, to better address complex public issues, this renewed approach of the literature has also focused on identifying the best possible combinations of tools for attaining this goal. As Zehavi puts it, “when combined these instruments [can] produce more effective governance than when employed separately” (Zehavi, 2012, p. 243). This also highlights the need for these instruments to be compatible: it is not enough for them to be deployed at the same time; they also need to coexist without friction (Bolognesi & Pflieger, 2019). Accordingly, the attributes of the different possible ways in which instruments relate have gained more attention.

Since instruments within a policy mix are not isolated from each other but rather constantly interacting (Howlett, 2018), this interaction must lead them to complement and reinforce, rather than counteract, each other (Briassoulis, 2005; Givoni, 2014; Howlett & Rayner, 2007). Hence, to be effective, the instruments of a policy mix should be coherent, which means that “[their components] correspond because they share a set of ideas or objectives” (May et al., 2005, p. 37). In other words, a set of coherent instruments means that those that are part of the same mix can contribute to, reinforce, or improve the chances of attaining their individual goals (Cejudo & Michel, 2017).

However, the responsibility of the design and operation of policy instruments is dispersed among different agencies, ministries, and levels of government (Briassoulis, 2005; Christensen & Lægreid, 2007; Koschinsky & Swanstrom, 2001; Organisation for Economic Cooperation and Development [OECD], 2005; Peters & Savoie, 1996). This shows that for a policy mix to be effective, coordination is also required (Peters, 2015). Indeed, to identify the design attributes of the tools that must be fine-tuned to achieve complementarity, avoid duplications and determine how best to sequence instruments over time (Taiehagh et al., 2013) during the enterprise of formulating effective policy mixes, information sharing and joint decision making must exist between public officials from different agencies and levels of government (Molenveld et al., 2020).

From What is Integrated to How Instruments are Integrated

The literature on policy tools and policy mixes has mainly been devoted to understanding what is integrated into the policy mix, whereas the understanding of how they are integrated has received less attention. Bali and colleagues clearly express the relevance of analyzing the process of integrating different tools when stating that to ensure that a policy addresses a problem not only at a specific moment within a given context but over time, it is necessary to go “beyond well-known cause and effect relationships among variables in a ‘static’ context and accommodating for the unpredictable and unprojectable” (Bali et al., 2019, p. 3).

Accordingly, recent scholarship has started to move from the analysis of single instrument choices to the study of the required set of tools for addressing complex problems, thus linking two bodies of literature that were formerly unrelated: the literatures on policy mixes and policy integration. Although both bodies now acknowledge that policy integration requires “adopting policy tools capable of overcoming or avoiding conflicts and contradictions in a policy mix” (Howlett et al., 2017, p. 74). Own emphasis added), policy coherence and coordination are generally assumed to be sufficient for policy integration to exist.

The premise in the literature on policy mixes is that if different instruments within a policy mix are coherent and coordinated, they would automatically be able to comprehensively address a complex problem (Bobrow, 2006; Howlett, 2019). For instance, in their account of the progress made in recent decades in the literature on policy instruments, Capano and Howlett (2020) recall the different types of instruments identified as being deployed and interacting in a mix, thus featuring “counterproductive effects among policy instruments, as well as synergies” (Capano & Howlett, 2020, p. 2). But the choices of instruments made at one point in time can become anachronic later, and this aspect remains undertheorized (Capano & Howlett, 2020, Justen, Fearnley, et al., 2014; Justen, Schippl, et al., 2014; Taiehagh et al., 2013). As Capano and Howlett put it, “The policy solutions—a set of adopted policy instruments—present at a given point in time may enshrine problems as well as specific tools that actors must eventually confront in the next decision-making moment” (Capano & Howlett, 2020, p. 4).

Similarly, the early work on policy integration was an extension of the literature on policy coherence and coordination, which were often seen as loosely equivalent terms aimed at achieving compatibility among the objectives of different policy areas (Adelle & Jordan, 2014; Adelle & Russel, 2013). Later, the work in this field showed policy integration was not a different type or configuration of coordination or policy coherence, but rather a process that involves design and implementation decisions regarding both substantive and administrative matters (Candel & Biesbroek, 2016; Cejudo & Michel, 2017; Trein et al., 2019).
More recently, through the comparative analysis across policy areas (Briassoulis, 2005; Carey, McLoughlin, & Crammond, 2015) and between countries (Howlett et al., 2017; Trein, 2017), the scholarly research has shed light on different attributes of policy integration, but without theorizing about how integration remains in place over time (Biesbroek & Candel, 2020; Trein et al., 2021).

So, if we take the idea of policy integration as a process seriously, we must challenge the premise that coherence and coordination at a given moment are enough to put the mix to work and to keep policy instruments integrated. Thus, we argue that for policy instruments to work together, they must remain integrated/bound throughout a process (that of policy integration). Indeed, policy integration is not just a moment in which an overall goal or central priority is set, after which all the instruments appropriately interact with each other, automatically enabling them to achieve such a goal (Cejudo & Michel, 2017). As Candel and Biesbroek argue, “policy integration goes beyond a ‘mere’ change in policy-level variables, in that it also requires a particular adjustment of institutional contextual conditions, such as subsystem jurisdictions and dominant policy belief systems” (Candel & Biesbroek, 2016, p. 217).

Our research question, then, is not about “what is integrated with what” (Hogl et al., 2016, p. 399), or about the design of an optimal mix (see Candel & Biesbroek, 2016; Howlett et al., 2017; May & Jochim, 2013). Nor is it about the factors that enable policy integration, such as institutional capacities, financial resources, timing, and context (Biesbroek & Candel, 2020; Trein, 2017). Our concern is more modest, but crucial for understanding the dynamics of a policy mix in a process of policy integration: how do the instruments in the mix remain integrated over time?

To put it simply, we argue that for policy instruments to overcome conflict and interact as expected, additional (procedural) instruments—that are not part of the policy mix, but of the process of integration—are required. These instruments do not aim to modify the target population’s behavior or the attributes of the problem; instead, their purpose is to affect how the instruments in the policy mix interact and, by doing so, to keep those instruments integrated.

**Method**

To further refine our understanding of policy integration, we looked into the conceptual literature on policy integration to search for explanations of how it works. We found that the causal mechanism identified in this literature for facilitating policy integration is interdependence (Candel & Biesbroek, 2016; Céjudo & Michel, 2017; Tosun & Lang, 2017). As Tosun and Lang (2017: 555) explain in their review of the concept, integration implies both “creating interdependencies between different policy sectors” and using “specific policy instruments, mostly of a procedural rather than substantive nature.”

But not all procedural instruments generate interdependence. In their enumeration of instruments, Tosun and Lang (2017, p. 561) include “inter-departmental plans, task forces, regulatory impact assessments, funding participants, and monitoring of the participation process [. . .], as well as soft instruments such as mission statements, interaction guidelines, and personal leadership.” To identify which instruments actually generated interdependence, we adopted an abductive research strategy whereby “a nonlinear, path dependent process [unfolds] with the ultimate objective of matching theory and reality” (Dubois & Gaddie, 2002, p. 556).

Indeed, since the process of integration could not be explained by the initial guiding theory (that of policy integration), we searched for new explanations in related bodies of literature (policy instruments and policy mixes) for identifying which (procedural) instruments trigger an interdependent interaction between the parts of an integrated policy (see Philippsen, 2018 for a more detailed explanation of the abductive research strategy for theory development), thus entering in a “dialectical engagement” with theories (Barzelay, 2007, p. 526) about policy integration and case studies on processes of integration in different countries and sectors.

Three procedural instruments were identified as key for producing interdependency to facilitate policy integration: policy frame, authority, and information. To empirically observe these instruments, we selected three instances of policy integration already analyzed in the literature where governments attempted to solve complex problems through policy integration, seeking variations across policy sectors and countries.

In the next section we describe each of these instruments and, then, we describe how they worked in each of the selected cases, according to previous case studies and assessments. The analysis of each of the three instruments for policy integration is structured around interdependence: we first describe the instrument for keeping the mix integrated and, later, we explain how each of them produces interdependence, thus keeping the mix integrated. Finally, we observe these instruments and how they worked in each of the three cases.

**The Process of Integration Requires Three Instruments**

Integration does not just happen by design. There is a need for specific instruments that bind the policy tools into a mix and keep them integrated over time. We propose that three instruments, together, perform a very specific function: generating interdependence between the policy tools (see Table 1). The first of these instruments is what Candel and Biesbroek (2016) call the “policy frame”—the acknowledgment of the diverse dimensions of a particular problem within a given governance system, which makes it worth a holistic governance approach. It entails the communication of a new policy narrative that shapes “practice through the
power of language and the story about a […] new approach to policy” (Carey, McLoughlin, & Crammond 2015, p. 179). As Klijn and Koppenjan (1997) explain, these are “communicative instruments” whose aim is not to modify behavior but the way different actors perceive the problem they intend to address. Building on these authors, we propose that the policy frame not only plays the role of creating a common understanding of the problem but also of the responsibilities each of the parts involved has in addressing it (the specific contributions of each component of the policy mix).

The frame becomes an instrument that keeps the mix integrated when the actors involved understand that each requires the others to do their part for them to perform their own, and thus be able to jointly address the problem. This instrument is, in short, the narrative of the interdependence between each of the actors responsible for the tools of the policy mix. The second instrument refers to the capacity that a “supportive architecture” has to make the changes deemed necessary to keep the policy mix functioning (see O’Flynn et al., 2011). As elements of a process that must follow a particular pathway to attain a policy goal, policy instruments require that specific functions within the process of integration are performed. Indeed, if policy integration is a process, this process “needs to be managed or steered” (Hogl et al., 2016, p. 410). Based on the attributes of policy integration outlined in the literature, we suggest that it requires the authority of a strategic decision-maker to mandate the execution of adjustments needed to keep the policy mix coherent and coordinated over time. This authority—which might be exercised by a single actor, a committee or an organization—must be above policy-level and institutional variables for being able to adjust them so that they are capable of achieving the desired solution, with information on those two types of variables to command the adjustments deemed necessary.

Hence, for authority to perform an integrative function, its exercise must be aimed at making the parts (agencies or programs) interdependent with each other, so that each requires the rest to carry out specific processes to generate their contribution to the overarching goal. Thus, this decision-maker is in a position to both enable each part to perform its functions (by offering guidance, allocating resources and removing obstacles in the implementation process), and also to oversee and held them accountable for their performance. It is, in other words, an authority that enables the integrated components to do their job not only for their own objectives’ sake but because by attaining them they would be able to contribute to the overarching goal.

The strategic exercise of authority also requires information for decision making. Indeed, the third instrument that keeps the mix integrated is information. This instrument does not refer to just any kind of information but specifically to information regarding the attributes of the tools within the mix and the mechanisms for making the use of that information indispensable for the parties to operate (a system of incentives to generate and use the information) (see Cejudo & Michel, 2017; Woo, 2018). Thus, the production and utilization of information regarding the attributes of the tools within the mix can be employed to determine where and when the design or implementation of each tool should be adjusted to guarantee an integral response.

Table 1. Instruments for Policy Integration: Definition and Function.

| Instrument for keeping the mix integrated | What is it? | How does it create interdependence to keep the mix integrated? |
|-----------------------------------------|-------------|---------------------------------------------------------------|
| Policy frame                            | A common understanding of the problem to be addressed, and of the responsibilities each of the parts involved has to attain a shared goal | The actors involved understand that each requires the others to do their part to be able to jointly address the problem |
| Authority                               | The capacity that the decision-maker has to carry out the changes required to keep the policy mix pertinent, relevant and functioning as planned over time | The authority exerted over the policy-level and institutional variables allows their design and operation to be adjusted so that they are capable of comprehensively addressing the complex problem by attaining their individual goals |
| Information                             | The strategic production and utilization of data regarding the attributes of the tools within the mix | The information regarding the progress each tool has made toward the overall goal becomes necessary for everyone involved to perform their role as part of the mix, and for the decision-maker to determine where and when the design or implementation of each tool should be adjusted to guarantee an integral response |

Source: own elaboration.
agency involved in the strategy to generate and share high-quality information.

Naturally, the capacity each of these three instruments has to perform its function of creating interdependency between subsystems and policy tools would depend on the quality of its attributes. A policy frame that clearly communicates the problem to be addressed and the expected role of each of the actors involved would be in a better position to make the need for every actor and agency to do their part evident. On the contrary, if the narrative is too vague, the odds will be stacked against having an effective policy mix. An equivalent scenario can be expected in terms of authority exercised and information produced.

In the following sections, we explain how these instruments work and use examples from three different case studies to illustrate how they operate. We use cases from three different countries (Australia, South Africa, and Chile) and sectors (social policy, food policy, and child care). The first case is from Australia, where the Social Inclusion Agenda (SIA) was an attempt by the federal government to “strengthen the Australian welfare state, reducing inequality and disadvantage” (Carey, McLoughlin, & Crammond, 2015, p. 168; see also Marston & Dee, 2015). These authors, who analyze this initiative as an attempt of joined-up government, explain that the SIA expected several ministries to be coordinated to promote social, economic, and civic participation while fostering compatibility between different policies, goals, and processes. They identify two interventions that the government deployed to achieve this goal: the adoption of a policy narrative of social inclusion and the introduction of new administrative structures, to “develop a shared understanding of, and coordinate efforts to embed, social inclusion approaches across agencies and jurisdictions” (Carey, McLoughlin, & Crammond, 2015, p. 179).

The second case is about food security policy integration in South Africa. The South African government launched an Integrated Food Security Strategy in 2002 “to combine a wide range of existing but fragmented food security efforts into an overarching approach,” including instruments from several sectors and levels of government to address the different dimensions of food security (availability, access, utilization, and stability) (Candel, 2018). It was officially recognized “that food security is a crosscutting problem that needs to be governed holistically” and there was a set of units in charge of coordination, led by the National Department of Agriculture (Candel, 2018). Finally, Chile Grows with You (Chile Crece Contigo) is an initiative that seeks to integrate several government programs and services to offer a “comprehensive protection system for children from the prenatal period to 4 years” (Molina et al., 2018), to address the problem of child poverty and its consequences for child development and social inequality. To that end, several agencies were charged with specific responsibilities for the program: The Ministry of Social Development as a national coordinating body, a Technical Committee within the Ministry of Planning, and the Executive Secretariat at the Ministry of Health (Cuñill-Grau et al., 2013). Given the fragmented nature of the social protection system in Chile, information was crucial, and a new law established an obligation for the “systematic collection and use of data for program management, and coordination of health, education, and social services” (Molina et al., 2018, p. 1). At the municipal level, social workers followed detailed guidelines to provide households with counseling and to refer them to relevant agencies.

The Policy Frame: A Narrative With Specific Implications

A shared understanding of the nature and attributes of a problem that is to be addressed by different actors in a given system has been identified in the literature as a necessary element to keep policy tools integrated. By referring to it as a “policy frame,” Candel and Biesbroek (2016) argue that the existence of a dominant understanding of the problem to be addressed is a constitutive property of policy integration. Since the policy frame not only establishes common ground on the extent of the cross-cutting nature of a certain problem but also on the extent to which it requires a comprehensive approach (Candel & Biesbroek, 2016), policy frames serve as the theory of change of the policy mix. A shared understanding of the problem and the means to address it allows for the parts (subsystems that consider a particular issue to be of their concern, agencies that substantially contribute to addressing the problem, and the policy tools they implement) to recognize themselves as components of a new governance arrangement and to define the specific contributions required from them to achieve the overarching goal. As May and Jochim (2013) argue, “ideas” (the term they use to refer to policy frame) are representative of shared commitments and understandings and, as such, they guide the government’s actions: they serve as organizing principles because they depict what should be done.

However, a policy frame entails more than providing a definition of the problem and a shared understanding of each actor’s contribution toward addressing it (Carey, McLoughlin, & Crammond 2015); it demands public officers to transform the narrative into concrete actions. Thus, the policy frame has the potential to shape “practice through the power of language and the story about ( . . .) a new approach to policy” (Carey, McLoughlin, & Crammond, 2015, p. 179). Indeed, the policy frame performs a specific function during the process of policy integration: by bringing about change in how actors perceive the problem, the narrative frame shifts values and promotes the coordination of people and ideas across organizations (Carey, McLoughlin, & Crammond, 2015; Klijn & Koppenjan, 1997a) and around the same issue.

Whenever a policy frame fails to generate a common understanding of the problem to be addressed, the actors responsible for solving it, or how they are expected to do so,
policy tools might be coherent and even coordinated but not integrated: “Changing the design of [policy tools to make them coherent] entails taking decisions that are not a product of coordination, but a result of substantive analysis of policy design that does not necessarily represent a coordination activity” (Cejudo & Michel, 2017). Hence, if well understood, “ideas” serve as integrative forces; if they are not understood “due to their vagueness, or are not endorsed, the glue for holding the [governing arrangement] together is weak.” (May & Jochim, 2013, p. 435)

For instance, Australia’s SIA was built on a narrative of social inclusion that expected every Australian to be able to participate in society and get equal access to goods and services. As a policy frame, it was “not intended to modify behavior as such, but to bring about change in how actors perceive the problem and, through this, shift values.” (Carey, McLoughlin, & Crammond, 2015, p. 179) According to the authors, the narrative did not work as planned. The SIA was perceived as a diffuse agenda, with vague responsibilities, and therefore participants “fell back on their existing practices.” In this case, the policy frame managed to promote a common objective but without explicitly detailing the contributions expected from each department involved (the authors call it “a mismatch between communicative and process level instruments and actions”) (Carey, McLoughlin, & Crammond, 2015, p. 181).

In the case of food policy in South Africa, Candel (2018) identifies a similar pattern: the government officially understood “food security [as] a crosscutting problem that needs to be governed holistically,” but this frame was not “institutionalized.” A shared problem definition across all relevant actors was not developed, and “[i]nstead, stakeholders had very different understandings of food security policy and associated causes and effects.” Consequently, the overall narrative of food policy integration was “narrowed down,” and each department continued working on its own routines and toward its own objectives, without adopting the “shared” goals as their own.

In Chile, the frame included both the shared understanding of the problem and solution and a detailed definition of the contribution of each department and program to the overall goal. After a presidential advisory board called for the creation of a comprehensive child protection system to address the problem of child poverty and its consequences (Torres et al., 2018), a law was passed to establish detailed responsibilities for each ministry and level of government. From then on, the regular operation of the ministries toward the target population had to respond to the priorities set by Chile Grows with You.

Thus, to perform its function as an integrative element, a policy frame establishes goals and provides a shared understanding of the purposes of the policy mix, and also, critically, specifies the contributions of each actor, policy or organization incorporated in the mix.

**Authority: Capacity to Affect the Policy Mix**

The literature on policy integration (or joined-up government) has identified several factors that inhibit governments in comprehensively addressing a complex problem. For instance, O’Flynn and colleagues (2011) distinguish the programmatic focus of a government’s intervention as a factor that hinders a comprehensive approach; May and Jochim (2013) explain the difficulty in having sustained support from all the actors involved, and Howlett (2000) points out another set of “typical procedural policy instruments” (such as training, institution creation, the selective provision of information, formal evaluations, accountability mechanisms and institutional reform) that affect the possibility of addressing cross-cutting problems.

Defining a complex problem and selecting or creating the policy tools needed to address it is a decision that can only be made by an actor with authority over all the tools (Cejudo & Michel, 2017; O’Flynn et al., 2011). However, it is not only a matter of design. In order to make sure that the integrated elements effectively contribute to the overall goal of solving the complex problem, authority needs to be exerted over the policy-level and institutional variables, so that their design and operation can be adjusted so that they are capable of comprehensively addressing the complex problem by attaining their individual goals.

In other words, solving cross-cutting problems entails altering the pre-existing governing arrangement: it requires modifying systems and processes, and continuously fine-tuning the substantive policy tools, enabling and overseeing their performance. Yet, affecting the current governance arrangement means that each of the subsystems involved would have to give up some of their discretion and resources on behalf of its success. Unsurprisingly, these changes do not go unchallenged; on the contrary, agencies and public officials tend to oppose or resist them, especially if they will affect their resources and autonomy.

Whether it is a policy czar, an inter-ministerial group, a dominant agency or any other actor considered suitable, the need for that figure to have formal authority over other subsystems is fundamental if it is to be able to influence activities across government so that the substantive instruments of the integrated policy effectively contribute to solving the complex problem. The absence of an actor with formal authority over the rest of the parts involved runs the risk of “generat[ing] limited change” (Carey, McLoughlin, & Crammond, 2015) and providing “a powerful rationale for inaction in some cases and for serious dysfunction in others.” (O’Flynn et al., 2011, p. 248)

Having authority over other subsystems involved is different from having the responsibility of “coordinating” them. Regarding this difference, May and Jochim—drawing on the literature on organizational attention—argue that “the mere
designation of roles and responsibilities is insufficient for focusing attention, establishing desired information flows, and building organizational relationships in support of a policy” (May & Jochim, 2013, p. 433). It is not a matter of coordinating existing elements of a governance arrangement, but rather of altering its structure by endowing a person, an organization, or a committee with the authority to influence the patterns of interaction between actors.

In short, keeping different policy tools integrated in a mix requires a figure with a mandate over the set of policy tools and authority over each subsystem involved, as exemplified in the three cases.

In Australia, the government created a Social Inclusion Unit (an interdepartmental working committee in the Department of the Prime Minister and Cabinet [PMC]) in charge of driving coordination across government and coherence between policies. Although the reason for placing it under the PMC was to demonstrate that the agenda was indeed one of the Prime Minister’s priorities, it did not have formal authority over other departments. The new Unit did not manage to create new lines of accountability or new financial structures and was unable to transform the way agencies worked. It therefore had limited effects on how the SIA was implemented and what information it generated.

In South Africa, achieving an integrated food security policy involved the creation of various spaces for coordination at the national and provincial levels, as well as a National Food Security Forum (NFSF). The responsibility for coordinating them lay with the National Department of Agriculture (NDA). However, even though the aim was that the NDA could steer food security policy, it was not endowed with authority over other sectors. This led to a shift from an ambitious strategy to a less comprehensive one that ended up focusing on agricultural production while “other subsystems participated infrequently or, in the case of provincial levels, used their autonomy to refrain from active implementation” (Candel, 2018).

As Drimie and Ruysenaar (2010, p. 324; quoted in Candel, 2018) explain, the “institutional architecture” of the initiative “remains no more than scaffolding.”

Chile Grows with You started in a similar way: a coordinating body was created in the Ministry of Social Development (originally the Ministry of Planning) to steer activities related to the initiative across three sectors (Health, Education, and Childcare) and regional and municipal authorities. But its mandate was broader: it included not only designing and overseeing the implementation of the initiative but also allocating budgets and monitoring compliance based on information gathered from all sectors.

These examples show that it is not the creation of a coordinating body but the continuous exercising of authority that allows interdependence between the components of the policy mix. In other words, the interaction of different instruments within an integrated strategy is not guaranteed by the design of the policy mix; it requires the authority of a decision-making body that exercises it throughout the process, to be able to continuously affect the design and operation of the policy tools based on updated and relevant information.

### Information About the Policy Mix, Used for Decision Making

Making strategic use of existing policy tools does not only require someone with authority over different subsystems; in the end, the aim is not only to modify procedural and substantive policy tools but to do it to become more effective in the enterprise of addressing every dimension of a complex problem. Accordingly, the decision-maker must have the necessary information to exercise their authority: information on the evolution of the complex problem and on the actual progress that each of the subsystems deemed necessary to address it is making (Cejudo & Michel, 2017).

It is not only the existence or sharing of information but its availability to every actor involved and, more importantly, its use for decision making that makes it an instrument for integration. Indeed, filling in reports on the activities, products or services delivered within each subsystem would not be enough; neither would an assessment of the extent to which the problem has been addressed work. As Ran and Nedovic-Budic (2018, p. 53) show, “what needs to be improved is the access to [. . .] information [. . .] by individual policy makers, rather than the ownership of such resources by one organization as a whole.”

The required information must be generated and delivered with the characteristics (format, time and specific content) that allow the decision-maker—who has been endowed with authority—to carry out the necessary adjustments to the policy tools to keep the policy mix coherent, coordinated and pertinent, given the ever-changing nature of the problem. Information sharing between different actors does not solve informational asymmetries; a “transfer of information from policy users to policymakers” is necessary (Woo, 2018).

In short, keeping different policy tools integrated in a mix requires information that allows the decision-maker to exercise their authority over the set of policy tools and over each subsystem involved to guarantee its proper functioning as an integrated policy mix. The three cases under analysis show how this instrument works.

As mentioned above, the Australian SIA succeeded in sending the proper signals to demonstrate political commitment to addressing poverty and social inequality. However, this was not accompanied by new procedures that make such a goal more attainable. The “symbolic gestures placed policymakers in a difficult position, creating what were perceived to be unreasonably high expectations” (Carey, Crammond, & Riley, 2015, p. 174) because there were no implementation mechanisms in place, just rhetoric (Carey, Crammond, & Riley, 2015). Inevitably, departments “continue[d] to carry the burden of accountability and implementation, whereas interdepartmental teams
generate ideas, but lack the implementation capacity or accountability mechanisms for getting things done.” (Carey, McLoughlin, & Crammond, 2015, p. 183)

Food security policy integration in South Africa failed to develop a shared policy frame that effectively steered the decisions by different agencies, and it did not allocate authority over all components of the strategy to a specific decision-maker. Not surprisingly, the generation, sharing and strategic use of information at the system level were not performed by any of the actors involved. The spaces where information could have been shared and used were not, in fact, where decision making took place. As Candel (2018, p. 109) explains, ministers and other top officials “hardly showed up at meetings and delegated junior staff.” Consequently, South Africa’s government did not have information about the problem, about the results of the different interventions or about the performance of the strategy (Hendriks, 2014).

In Chile, the budget for Chile Grows with You is allocated to the Ministry of Social Development, which transfers it to the ministries involved according to their performance on certain indicators (for which a system was created to keep information available and updated) (Molina et al., 2018). More importantly, the programs that are part of the strategy require this information to operate since the Ministry of Social Development would only transfer them the economic resources to target the people identified in the strategy’s registry. As Molina and colleagues (2018, p. 6) identify in the Chilean case, good practices regarding information use included:

- collection and use of data for program management and intersectoral coordination using the program monitoring system;
- regular evaluation of program components and use of data for improving services; and increasing focus on developing and implementing quality standards, which are used for both tracking progress and providing incentives.

Therefore, if the authority that the decision maker has does not cover the whole mix, or it lacks relevant information, its capacity for making decisions at the institutional and policy levels is limited.

Conclusion

A policy mix is composed of several instruments that, working together, aim to solve complex problems. Working together as a policy mix does not mean merely coexisting without clashing, even if they are perfectly complementary or coherent. It means interacting with each other, following a policy frame with a shared understanding of their contribution to an overarching goal, under an authority that steers the process of integration, and based on information about the whole policy mix and the operation of each component. If there were no need for interaction, each element of the policy mix could work separately. If there is a need for interaction, then a process of policy integration is required and the performance of specific functions by these three instruments is necessary to make them interdependent. Paraphrasing Givoni (2014), we suggest that, if there were no interactions between policy instruments within a mix, there would be no use and need for policy integration.

In this paper, we have offered concepts and propositions to improve our understanding of how policy integration works. We contribute to the research agenda on policy integration put forward by Trein et al.’s (2021) in three ways. First, by bridging this literature to the broader public policy scholarly debate, particularly on policy mixes, policy design and instruments’ interactions (Howlett, 2019; Jordan & Turnpenny, 2015). Second, by moving “toward a cumulative analysis of existing case studies”, taking advantage of existing analysis and learning from them beyond the specific context and sector in which they have been developed (Wolf & Baehler, 2017). And, third, by paying attention to the organizational dynamics that shape how implementing organizations respond to integration strategies (Givoni, 2014; Molenveld et al., 2020).

We have shown that there are three instruments that serve to generate interdependence between policy tools and, hence, integrate them into a policy mix: a policy frame, authority, and information. The key difference vis-à-vis other instruments is that their purpose is to affect (modify, create, steer) the components of the policy mix at the institutional and policy levels (the agencies, the substantive policy tools, the information generated, and the behavior of public officials), rather than attempting to directly modify the problem that the policy mix wants to solve.

But we have also argued that it is not the mere existence of such instruments that matters, but their continuous performance of functions to specify the attributes of the problem and the specific contributions of each subsystem (and their corresponding instruments within the mix), with authority and information to steer the operation of the mix as a whole. These instruments make interdependency among policy tools unavoidable and thus enable policy integration.

By using examples from the existing literature on policy integration, we have seen that these integrative instruments shape the process of integration. When they are incomplete or do not perform their functions adequately, they help to explain the shortcomings of this process. The argument could be further tested in experiences of policy integration in new sectors and countries.

With this argument, we seek to advance the discussion on policy integration for a better understanding of how it works and, by doing so, to inform decision-makers about the specific policy tools necessary to achieve it. In this way, policy makers will be aware that policy integration is more than enacting laws and regulations or launching ambitious comprehensive strategies: it requires the deployment of specific instruments that generate interactions among the components being integrated and that keep those elements integrated over time.
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ORCID iD
Cynthia L. Michel https://orcid.org/0000-0003-4603-0427

References
Adelle, C., & Jordan, A. (2014). Policy coherence for development in the European Union: Do new procedures unblock or simply reproduce old disagreements? *Journal of European Integration*, 36(4), 375–391. https://doi.org/10.1080/07036337.2013.845180

Adelle, C., & Russel, D. (2013). Climate policy integration: A case of Déjà Vu? *Environmental Policy and Governance*, 23(1), 1–12. https://doi.org/10.1002/et.1601

Bali, A. S., Capano, G., & Ramesh, M. (2019). Anticipating and designing for policy effectiveness. *Policy and Society*, 38(1), 1–13. https://doi.org/10.1016/j.polsoc.2019.1579502

Barzelay, M. (2007). Learning from second-hand experience: Methodology for extrapolation-oriented case research. *Governance*, 20(3), 521–543. https://doi.org/10.1111/gove.2007.20.001

Biesbroek, R., & Candel, J. J. L. (2020). Mechanisms for policy integration. *Policy Sciences*, 53(4), 61–84. https://doi.org/10.1007/s11077-019-09354-2

Bobrow, D. B. (2006). Policy design: Ubiquitous, necessary and difficult. In B. G. Peters (Ed.), *Handbook of public policy* (pp. 75–96). SAGE. https://doi.org/10.4135/9781848608054.n5

Bolognesi, T., & Pfleger, G. (2019). The coherence (s) of institutional resource regimes: Typology and assessments from the case of water supply management. *Environmental Science & Policy*, 99, 17–28.

Briassoulis, H. (Ed.). (2005). *Policy integration for complex environmental problems*. Routledge.

Candel, J. J. L. (2018). Toward a processual understanding of policy integration. *Policy Sciences*, 49(3), 211–231. https://doi.org/10.1007/s11077-016-9248-y

Capano, G., & Howlett, M. (2020). The knowns and unknowns of policy instrument analysis: Policy tools and the current research agenda on policy mixes. *SAGE Open*, 10(1), 1–13. https://doi.org/10.1177/2158244019000568

Carey, G., Crammond, B., & Riley, T. (2015). Top-down approaches to joined-up government: Examining the unintended consequences of weak implementation. *International Journal of Public Administration*, 38(3), 167–178. https://doi.org/10.1080/01900692.2014.903276

Carey, G., McLoughlin, P., & Crammond, B. (2015). Implementing joined-up government: Lessons from the Australian social inclusion agenda: Implementing joined-up government. *Australian Journal of Public Administration*, 74(2), 176–186. https://doi.org/10.1111/1467-8500.12096

Cejudo, G. M., & Michel, C. L. (2017). Addressing fragmented government action: Coordination, coherence, and integration. *Policy Sciences*, 50(4), 745–767. https://doi.org/10.1007/s11077-017-9281-5

Christensen, T., & Lægreid, P. (2007). The whole-of-government approach to public sector reform. *Public Administration Review*, 67(6), 1059–1066. https://doi.org/10.1111/j.1540-6210.2007.00797.x

Cunill-Grau, N., Fernández, A. M., & Thezá Manríquez, M. (2013). La cuestión de la colaboración intersectorial y de la integralidad de las políticas sociales: Lecciones derivadas del caso del sistema de protección a la infancia en Chile [The issue of intersectoral collaboration and the integrality of social policies: Lessons from Chile’s child protection system]. *Polis (Santiago)*, 12(36), 289–314. https://doi.org/10.4067/S0718-65682013000300013

Dubois, A., & Gadde, L. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research*, 55(7), 553–560. https://doi.org/10.1016/S0148-2963(00)00195-8

Givoni, M. (2014). Addressing transport policy challenges through policy-packaging. *Transportation Research Part A*, 60, 1–8. https://doi.org/10.1016/j.tra.2013.10.012

Hendriks, S. (2014). Food security in South Africa: Status quo and policy imperatives. *Agrekon*, 53(2), 1–24. https://doi.org/10.1080/03031853.2014.915468

Hogl, K., Kleinschmit, D., & Rayner, J. (2016). Achieving policy integration across fragmented policy domains: Forests, agriculture, climate and energy. *Environment and Planning C: Government and Policy*, 34(3), 399–414. https://doi.org/10.1068/c0263774X16644815

Howlett, M. (2000). Managing the “hollow state”: Procedural policy instruments and modern governance. *Canadian Public Administration/Administration Publique Du Canada*, 43(4), 412–431. https://doi.org/10.1111/j.1754-7121.2000.tb01152.x

Howlett, M. (2018). The criteria for effective policy design: Character and context in policy instrument choice. *Journal of Asian Public Policy*, 11(3), 245–266. https://doi.org/10.1177/2158244017740221

Howlett, M. (2019). Procedural policy tools and the temporal dimensions of policy design. Resilience, robustness and the sequencing of policy mixes. *International Review of Public Policy*, 11(1), 27–45.

Howlett, M., & Rayner, J. (2007). Design principles for policy mixes: Cohesion and coherence in “New Governance Arrangements.” *Policy and Society*, 26(4), 1–18. https://doi.org/10.1016/S1449-4035(07)70118-2
Howlett, M., Vince, J., & Del Rio, P. (2017). Policy integration and multi-level governance: Dealing with the vertical dimension of policy mix designs. *Politics and Governance*, 5(2), 69–72. https://doi.org/10.17645/pag.v5i2.928

Jordan, A., & Turnpenny, R. (Eds.). (2015). *The tools of policy formulation: Actors, capacities, venues and effects*. Edward Elgar.

Justen, A., Fearnley, N., Givoni, M., & Macmillen, J. (2014). A process for designing policy packaging: Ideals and realities. *Transportation Research Part A*, 60, 9–18. https://doi.org/10.1016/j.tra.2013.10.016

Klein, E.-H., & Koppenjan, J. (1997). *Public management and multi-level governance: Dealing with the vertical dimension of policy mix designs*. Oxford University Press.

May, P. J., & Jochim, A. E. (2013). Policy regime perspectives: Policies, politics, and governing. *Policy Studies Journal*, 41(3), 426–452. https://doi.org/10.1111/psj.12024

May, P. J., Jones, B. D., Beem, B. E., Neff-Sharum, E. A., & Paugue, M. K. (2005). Policy coherence and component-driven policymaking: Arctic policy in Canada and the United States. *Policy Studies Journal*, 33(1), 37–63. https://doi.org/10.1111/j.1541-0072.2005.00091.x

Molenveld, A., Verhooest, K., Voets, J., & Steen, T. (2020). Images of coordination: How implementing organizations perceive coordination arrangements. *Public Administration Review*, 80(1), 9–22. https://doi.org/10.1111/puar.13136

Molina, H., Castillo, C. A., Sansotta, A. T., Delpiano, P. V., & Murray, J. (2018). Scaling up an early childhood development programme through a national multisectoral approach to social protection: Lessons from Chile Crece Contigo. *BMJ*, 363, Article K4513. https://doi.org/10.1136/bmj.k4513

O’Flynn, J., Buick, F., Blackman, D., & Halligan, J. (2011). You win some, you lose some: Experiments with joined-up Government. *International Journal of Public Administration*, 34(4), 244–254. https://doi.org/10.1080/01900692.2010.540703

Organisation for Economic Cooperation and Development. (2005). *Modernising government: The way forward*.

Peters, B. G. (2015). *Pursuing horizontal management: The politics of public sector coordination*. University Press of Kansas.

Peters, B. G., & Savio, D. J. (1996). Managing incoherence: The coordination and empowerment conundrum. *Public Administration Review*, 56(3), 281–290. https://doi.org/10.2307/976452

Philippsen, K. (2018). Theory building: Using abductive search strategies. In P. Freytag & L. Young (Eds.), *Collaborative research design*. Springer. https://doi.org/10.1007/978-981-10-5008-4_3

Ran, J., & Nedovic-Budic, Z. (2018). Designing an information infrastructure for policy integration of spatial planning and flood risk management. *International Journal of E-Planning Research*, 7(1), 53–85. https://doi.org/10.4018/ijerp.2018011014

Salamon, L. M. (Ed.). (2002). *The tools of government: A guide to the new governance*. Oxford University Press.

Taeihagh, A., Givoni, M., & Bañares-Alcántara, R. (2013). Which policy first? A network-centric approach for the analysis and ranking of policy measures. *Environment and Planning B*, 40(4), 595–616. https://doi.org/10.1068/b38058

Torres, A., Lopez Boo, F., Parra, V., Vazquez, C., Segura-Pérez, S., Cetin, Z., & Pérez-Escamilla, R. (2018). Chile Crece Contigo: Implementation, results, and scaling-up lessons. *Child: Care, Health and Development*, 44(1), 4–11. https://doi.org/10.1111/cch.12519

Tosun, J., & Lang, A. (2017). Policy integration: Mapping the different concepts. *Policy Studies*, 38(6), 553–570. https://doi.org/10.1080/14428727.2017.1339239

Trein, P. (2017). Coevolution of policy sectors: A comparative analysis of healthcare and public health. *Public Administration*, 95(3), 744–758. https://doi.org/10.1111/padm.12323

Trein, P., Biesbroek, R., Bolognesi, T., Cejudo, G. M., Duffy, R., Hustedt, T., & Meyer, I. (2021). Policy coordination and integration: A research agenda. *Public Administration Review*. https://doi.org/10.1111/par.13180

Trein, P., Meyer, I., & Maggetti, M. (2019). The integration and coordination of public policies: A systematic comparative review. *Journal of Comparative Policy Analysis: Research and Practice*, 21(4), 332–349. https://doi.org/10.1080/13876988.2018.1496667

Wolf, A., & Baehler, K. J. (2017). Learning transferable lessons from single cases in comparative policy analysis. *Journal of Comparative Policy Analysis: Research and Practice*, 21, 332–349. https://doi.org/10.1080/13876988.2017.1399578

Woo, J. J. (2018). Educating the developmental state: Policy integration and mechanism redesign in Singapore’s skills future scheme. *Journal of Asian Public Policy*, 11(3), 267–284. https://doi.org/10.1080/17516234.2017.1368616

Zehavi, A. (2012). New governance and policy instruments: Are governments going “soft”? In D. Levi-Faur (Ed.), *The Oxford handbook of governance*. Oxford University Press.