

Mapping scientific research on policy capacity: A bibliometric analysis and qualitative framework synthesis

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Abstract

It is a shared understanding among policy scholars and practitioners that governments with high levels of policy capacity are better able to design and implement public policies for driving economic growth and social development. Despite the centrality of policy capacity, a common definition and measurement of policy capacity remain elusive. There exists a long list of concepts that seek to encapsulate the ability of the governance system to deliver desired policy outcomes – such as state capacity, administrative capacity, governance capacity, bureaucratic capacity – that stimulates greater academic enthusiasm but more often contributes to intellectual divergence on the subject. This paper performed a conceptual analysis of policy capacity through a bibliometric analysis and qualitative framework synthesis of relevant literature various fields like political science, public administration and policy studies. It identified a pattern of fragmentation in the overall approach in defining and operationalizing capacity, which underlies the divergence in the conceptual and operational understanding of policy capacity. A synthetic framework is offered with the intention of putting together this disparate research into a process-oriented dynamic of the development of policy capacity.

Keywords: policy capacity, capacity, capacity development, capacity building, bibliometric analysis, qualitative framework synthesis

Introduction

The ability of the government to do what it intends to do is a fundamental concept in the study of public policy and administration. Policy scholars and practitioners agree that governments with high levels of policy capacity are better able to design and implement policies for whatever outcomes they choose to pursue, including economic growth and social development. For this reason, the idea of building and developing capacity has long been identified as an integral part of the management of government affairs and policymaking around the world (Burgess 1975). In the context of international development, capacity building initiatives have been introduced, albeit haphazardly, to improve government performance, usually in the context of foreign aid conditionality (Grindle and Hilderbrand 1995). More recent literature in OECD countries have pointed to the mismatch between what governments were expected to do and what they can actually do, particularly made salient by the Global Financial Crisis (Howlett 2009, Peters, Pierre and Randma-Liiv 2011, Levine 2012).

Although government capacity enjoyed much academic enthusiasm since the post-second World War, the literature is largely disparate and a common definition and measurement of capacity remain elusive (Brinkerhoff and Morgan 2010). Over 30 years ago, Honadle already raised the conceptual and operational problems of the notion of capacity in public sector and conceded that "[i]t is unlikely that a consensus definition of capacity be reached" (Honadle, 1981 p. 575). Its latency as a concept makes it convenient to measure capacity as an outcome/output or a process of exercising authority, failing to capture the government's potential while emphasizing heavily 'realized potentials'. The changing nature of governance functions and policy work also poses challenges to knowing what exactly governments seek to achieve (Rhodes 2012, Pierre and Peters 2000, Rhodes 1997, Colebatch 2006), making it difficult to assess whether governments can do what they needed to do. Thus, there exists an unmet demand to settle the discourse on what is capacity and what comprises it (Fukuyama 2013, Rotberg 2014).

For long, scholars used state capacity to define the ability of political systems to govern its population and territory but several conceptualizations have been offered to introduce specificity on what government functions are needed to be performed. These broad range of terms, which includes institutional capacity, state capacity, governance capacity, policy capacity, are often used interchangeably with little to no effort of engaging critically with the other concepts. As a result, the multiplicity of concepts, while a sign of much academic enthusiasm on the subject, does not contribute to any theoretical convergence of the academic field dedicated to understanding and measuring capacity. The heterogeneity of concepts to capture government capacity suggests the relevance of the term to many fields like political science, sociology, economics and public administration, yet these fields usually only treat capacity as a residual concept owing to its latency and high level of abstraction (Addison 2009). Up to this date, little systematic effort to synthesise this fragmented field have been undertaken.

The failure to properly define capacity breeds the failure to properly understand and improve capacity. Interventions introduced to build or develop capacities were supposed to broadly improve the conditions to public action, but these conditions refer to a set of levels and concepts like skills and competencies of individuals, systems and procedures of organizations and rules and norms of institutions too broad to convincingly say that any capacity development programs work (Morgan and Taschereau 1996, Lusthaus, Adrien, Perstinger 1999). Inevitably, the catch-all umbrella

term of capacity and capacity development constrains the effective identification and evaluation of capacity building interventions. This is crucial since capacity development interventions prove to be of limited impact on public sector capacity (Gwin 2005). There is an imperative to unpack the interrelationships, interactions and interdependencies of these levels and concepts in order to arrive at a better conceptualization of capacity.

To address this gap, the study undertakes a conceptual analysis of policy capacity through a bibliometric analysis of relevant literature. In doing so, the study identifies patterns that underlie the divergence in the conceptual and operational understanding of policy capacity. By building on the recent definition and framework offered by Wu, Ramesh and Howlett (2015), it hopes to map out the intellectual linkages between academic literature that engage in the policy capacity discourse by identifying their disciplinary origins, geographic focus and timing of publication to get a better understanding of the degree of fragmentation of the extant literature. Less than 100 of these articles are chosen to be synthesized into a multi-level comprehensive framework on policy capacity. Capturing both similar and distinctive policy capacity domains at various level of policy actors, this framework refines earlier conceptual models on policy capacity, and proposes the notion that scholars and practitioner should look at finer-grained definitions when assessing and diagnosing capacity in public policy.

The paper is structured as follows. We first lay out the methods adopted for this study - bibliometric analysis and qualitative framework synthesis. The bibliometric analysis shows that capacity is a concern across various jurisdictions and disciplines, going beyond international development literature. Based on a subset of the literature, the qualitative framework synthesis adheres to the multi-level analysis proposed by Wu, et al. (2015) and surfaces various domains of policy capacity defined largely based on their objectives – capacity for what? The paper concludes with discussion of a synthetic framework that attempts to introduce how it may change across different forms of capacity – input capacity, output capacity and intermediate outputs.

Methods

Bibliometric search for policy capacity literature

We identified the broad literature making a mention of policy capacity through the following query on the Web of Science database:

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("administrative capacit*" OR "analytical capacit*" OR "bureaucrat capacit*" OR "coordinati* capacit*" OR "evaluation capacit*" OR "financial capacit*" OR "fiscal capacit*" OR "governance capacit*" OR "government capacit*" OR "implementation capacit*" OR "implementing capacit*" OR "institutional capacit*" OR "legal capacit*" OR "legislative capacit*" OR "management capacit*" OR "managerial capacit*" OR "military capacit*" OR "policy capacit*" OR "political capacit*" OR "public?sector capacit*" OR "regulatory capacit*" OR "state capacit*" OR "statistical capacit*" OR "taxation capacit*") AND (policy)
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The publication types included in our search were: articles, book chapters, editorial materials, proceedings papers, and reviews. This search was conducted on 26

February 2018. It returned 2,145 publications in the Web of Science database published during 1948-2018.

To uncover the broad themes and topics discussed in this literature, we used CitNetExplorer. CitNetExplorer, a software to visualise and analyse bibliometric data, to identify and cluster the literature on policy learning based on citation analysis (van Eck and Waltman, 2014; see van Eck and Waltman, 2017 for a discussion on the clustering technique of CitNetExplorer).

We identified 438 publications that formed 16 clusters – 1707 publications did not belong to any cluster. These 438 publications were then examined using VOSViewer. VOSViewer is a bibliometric software developed by researchers at the Leiden University (van Eck and Waltman, 2007; van Eck and Waltman, 2010). It analyses bibliometric data and visualizes results using the Visualization of Similarities (VOS) technique. In this technique, nodes (such as authors, documents, or keywords) are plotted closer to each other on a two-dimensional space when they are assessed to be more “similar” to each other. Similarity between nodes depends on the type of analysis conducted. For keyword (or term) co-occurrence analysis, nodes are considered to be similar when they are used together in the same article. For citation analysis, nodes are considered to be similar when they cite one another. For co-citation analysis, nodes are considered to be similar when they are cited by the same article. It has been previously used, for example, for a bibliometric analysis of five decades of research in the journal *Policy Sciences* (Goyal, 2017), a citation analysis of the advocacy coalition framework (Wellstead, 2017), and a bibliometric review of the literature on policy learning (Goyal and Howlett, 2018).

(i) Inclusion and exclusion criteria for systematic review

From the evidence pool identified from bibliometric search, we employed a systemic review approach, guided by a set of inclusion and exclusion criteria, to filter studies that are irrelevant to our research question, objectives and scopes. This process of sifting the abstracts and full texts to identify relevant studies are jointly conducted by both the second and third authors, and reviewed and audited by the first author. Ongoing discussions were held to clarify doubts and disagreements in our judgement of relevance, before achieving consensus to include a total of 92 studies in our final synthesis. Thereafter, we designed a data extraction template to pull out relevant data that could meaningfully inform the synthesis process (see appendix).

(ii) Qualitative framework synthesis

A qualitative framework synthesis approach is adopted to integrate the ways in which the different concepts, definitions and operationalisations of policy capacity are approached by scholars from different conventions within social sciences, public administration and policy sciences. Framework synthesis is a matrix-driven and pragmatic synthesis approach that allows themes or concepts identified a priori to be used as the basis to generate a coding framework that enables construction of a revised and refined framework that improve policy understandings (Dixon-Woods 2011; Carroll et al 2013). In this study, we use the policy capacity conceptual model proposed by Wu et al (2015) as the guiding analytical frame at the preliminary stage of the synthesis process. We then build on the framework, inductively and iteratively, from cross-examining a broad range of cross-disciplinary articles that spanned different policy fields, in order to bring forth improved clarity to the existing policy capacity framework. Our synthesis attempt is aimed at achieving a more granular conceptualisation of policy

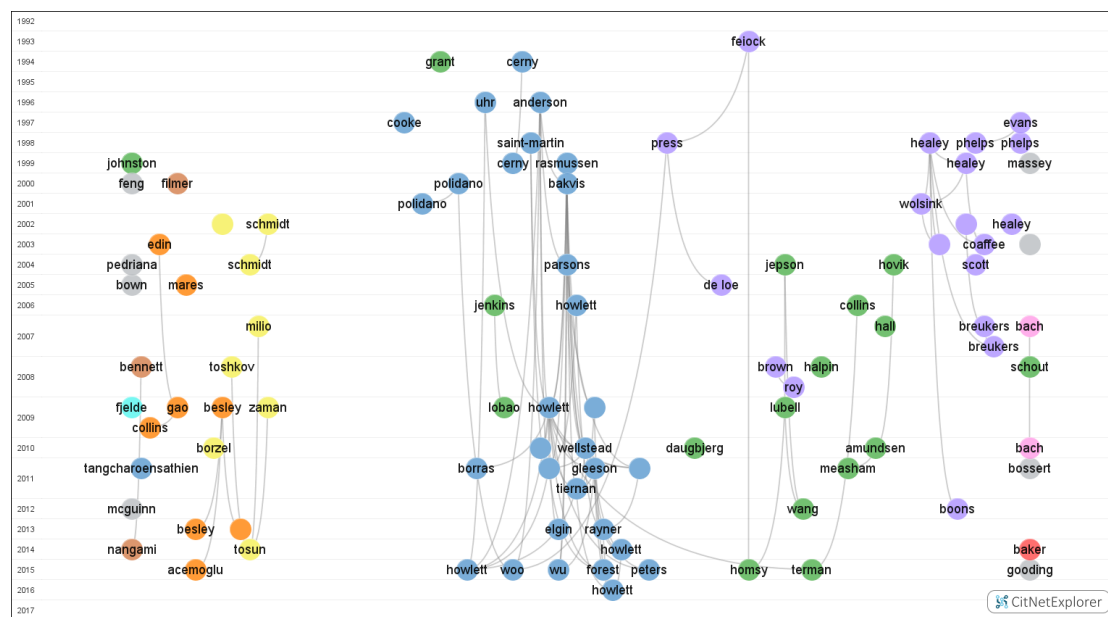
capacity domains that are salient in different levels of government, with the ultimate aim of shedding improved understandings and in-depth insights to the theoretical and applied literature of policy capacity.

Findings

Bibliometric findings

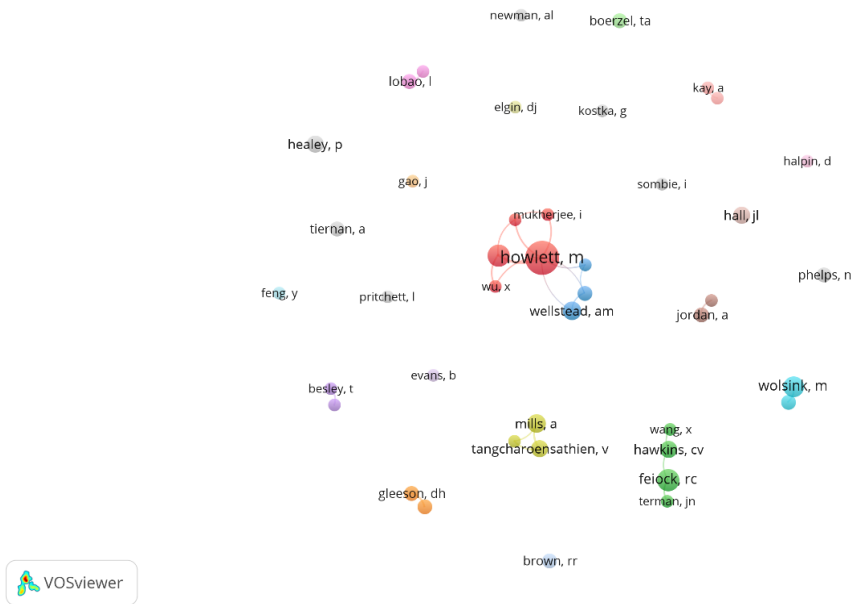
(i) Clusters in the field

The literature consists of several clusters discussing capacity. The largest group in the dataset consisted of 123 publications that involved policy capacity (in blue). The second largest cluster consisted of 86 publications spread across themes such as cities, sustainability, and European governance. The next cluster discussed topics around institutional capacity, and energy and environment policy. Three other clusters with more than 10 publications were on state capacity (53 publications), European Union (32 publications), and health (12 publications).

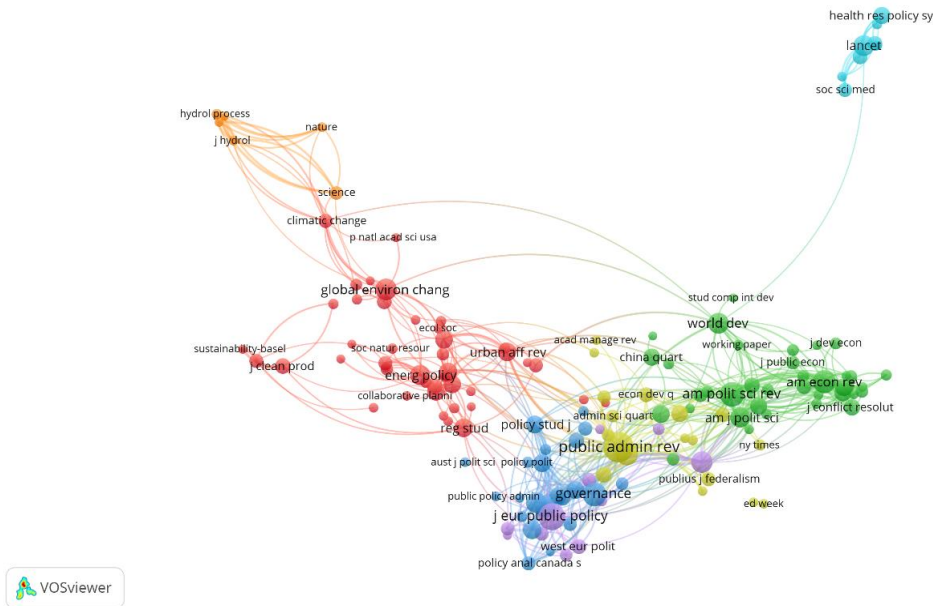


(ii) Co-authorship network

These 438 publications were authored by 773 authors in all. Of these, 42 authors have published more than thrice on topics related to capacity. In this dataset, the most published authors were Howlett (18 publications) and Ramesh (8 publications). The co-authorship network shows limited collaboration amongst authors working on issues that have some conceptual overlap. This is not to say that this pattern is necessary unique to the capacity literature, but it still highlights scope for more formal collaboration in the field.

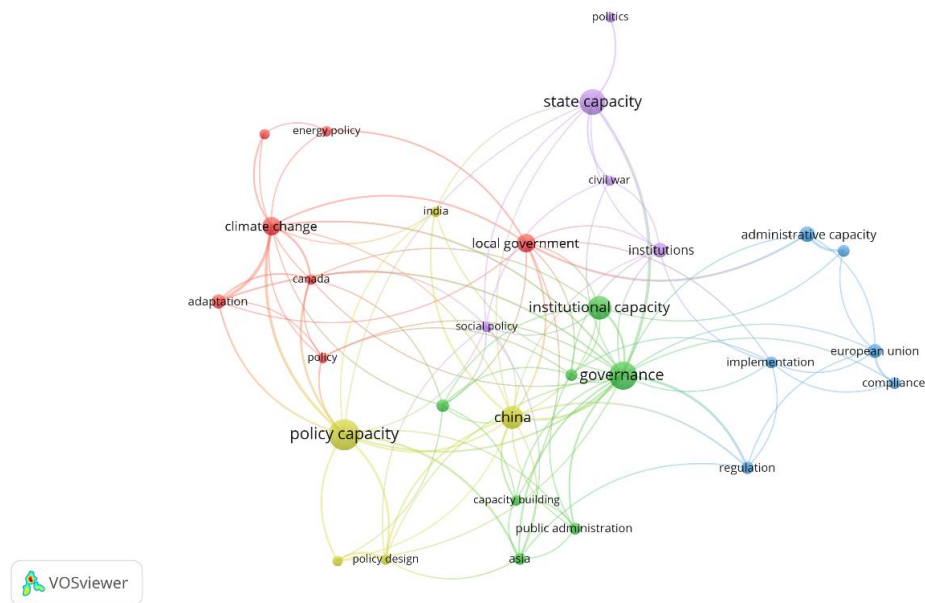


(iii) Co-citation network of sources



We found that 146 sources had more than 20 publications in this dataset. A map of the co-citation sources indicates the disciplinary spread of capacity literature. The nodes of this co-citation network are sources such as journals, conferences, or books. A link between two sources indicates that the sources are frequently cited together in publications in this dataset. We identified seven prominent clusters in the data. These included sources pertaining to climate change, energy & environment, and urban infrastructure (in red), sources in public policy and administration (in blue and yellow), sources focusing on Europe (in purple), and sources on American and international development (in green). In addition, some sources in science (such as Nature, Science, and journals on hydrology) and in public health (such as the Lancet and Social Science & Medicine) were also found.

(iv) Co-occurrence network of author keywords



Framework synthesis

(i) **Study contexts and characteristics**

The 92 literature on policy capacity included in the framework synthesis encompasses 16 distinctive policy areas (climate change, sustainable development and environmental, public administration and management, health, education, energy, public finance, housing, local governance, agriculture and biotechnology, international relations, economic, social, transport, disaster management as well as science and innovation) that spanned a host of developed and developing countries in all five regions. Most of the articles are empirical pieces or combinations of conceptual and empirical pieces. Only 7 articles are conceptual pieces. The included articles in the synthesis employ a diverse set of methods which include historical document analysis using comparative case methods, single case study capitalising on field survey, focus group discussion and interviews, cross-country econometric analysis or quantitative analysis of a single jurisdiction based on primary field survey or secondary administrative data, and content analysis using media sources.

(ii) **Typology of policy capacity domains at different levels of government**

The synthesis of 92 policy capacity literature enabled the construction of a typology which reflects different policy capacity domains that are salient at different levels of government. At the macro level of policy capacity which involves policy actors such as international or regional pacts or alliances, national governments and sub-national governments, there are six notable policy domains that are deemed important in the

policy process. The first policy capacity domain that is integral in cultivating strong image and preserving the strategic positions of cross-national alliances or national governments is institutional capacity. Institutional capacity is defined as having the capacity to experiment with novel policy ideas and make intelligent choices to inform the design of policy, as well as having the capacity to make strategic decisions and steer the adoption of those decisions (Bryan 2016; Foo 2015; Karro and Kattel 2015; Rodiguez 2013). The second policy capacity domain that is key in both formulation and implementation of public policies is administrative capacity. Administrative capacity is defined as having the capacity to identify, formulate and implement policy decisions and ensuring the uniformity of implementations (Baer 2014; Briebe 2018; Cunha et al 2017; Guillen and Capron 2016; Hawkes et al 2016; Karo and Kattel 2015; Knutsen 2013; Matei and Camela-Dogaru 2013; Mendez and Bachtler 2017; Namara et al 2015; Surubaru 2017; van Ham 2018; Wen 2017). The third policy capacity domain that is indispensable in ensuring policy compliance at the macro level is regulatory capacity. Regulatory capacity is defined as having the capacity to monitor and enforce established rules and procedures via a distinct regulatory structure (Carbonetti et al 2014; Dung et al 2017; Lei et al 2017; Newman and Posner 2015; Wen 2017). The fourth policy capacity domain that is salient at the macro level – fiscal capacity - signals the ability of governments to collect and raise revenues (Liddo et al 2016; Primorac 2015). Fiscal capacity also include the capacity of government to maintain fiscal prudence through its ability to monitor financial operations and maintain accountability and transparency in the budget process (Cuberes and Mountford 2012; Darcy and Nistotskaya 2018; Kim et al 2018). The fifth policy capacity domain that is crucial in allowing seamless and continuous functionality of the government to take place is financial capacity. Financial capacity at the macro level, defined as having the capacity to generate additional revenues as well as to control economic activities (Herrera and Martinelli 2013), is important to maintain macroeconomic stability of a country or region. The sixth policy capacity domain at the macro level, important to maintain legitimacy and sovereignty is political capacity. Political capacity is defined as having the capacity to mobilise societal support and consent in the pursuit of different policy goals, as well as to coordinate and control diverging interests to reconcile conflicting ideologies in the policy process (Bakir 2015; Busseti and Dente 2016; Carbonetti et al 2014; Hughes et al 2015; Karo and Kattel 2015; Pereira and de Silva 2017; Rayner et al 2013; Wen 2017).

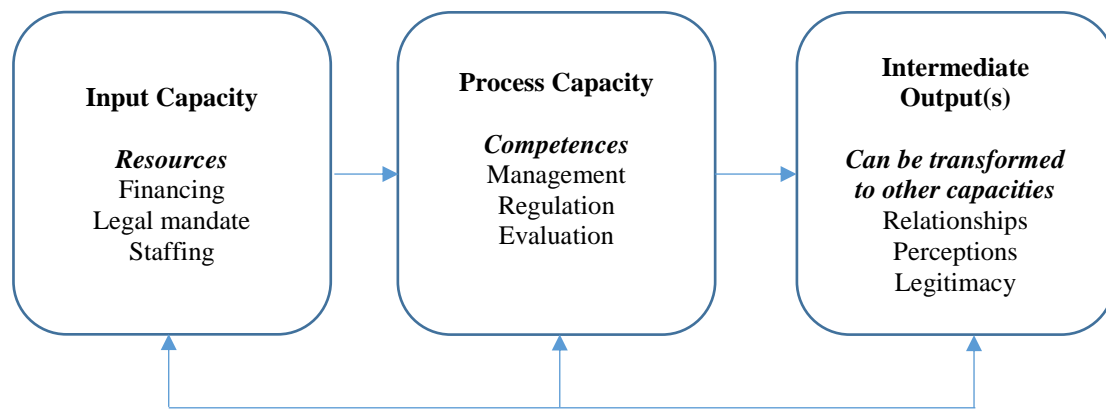
The mezzo level of policy capacity involves organisational actors such as governmental departments, quasi or autonomous governmental organisations and non-profit organisations. There are five policy capacity domains identified to be salient at the mezzo level. The first policy capacity domain which is important at the organisational level is institutional capacity, defined as having the capacity to develop strategic direction to enhance organisational performance (Foo 2015; Rao and Kaul 2018; Rodiguez 2013; Shroff et al 2017). The second policy capacity domain imperative in maintaining organisational functions is administrative capacity. Administrative capacity is defined as having the capacity to control different management systems, and having the capacity to identify, formulate and implement programmes or policies (Matei and Camela-Dogaru 2013; Hawkes et al 2016; Swann 2017). The third policy capacity domain crucial in ensuring the continuity of organisational functions is financial capacity. Contrary to the macro level, financial capacity at the mezzo level refers to the capacity to maintain sustainable levels of real revenues in the short term and real assets in the longer term (Potluka et al 2017; Rayner et al 2013; Wang et al 2014). The fourth policy capacity domain that is pertinent at the

mezzo level is analytical capacity. Analytical capacity is defined as having the capacity to utilise and develop skills required to generate insights, provide policy advice and effectively communicate these to policy decision-makers and public (Elgin and Weible 2013; Saguin 2016; Shroff et al 2017; Williams and McNutt 2013). The last policy capacity domain identified as crucial at the mezzo level is political capacity. Political capacity is defined as having the capacity to navigate different levels of bureaucracy and maintain good relations at both the superior and subordinate levels, which include mobilising bureaucratic support and high-level administrative buy-in to advance organisational goals (Pereira and de Silva 2017; Rayner et al 2013).

At the micro level which involves individual policy workers such as public servants or NGO workers in the capacity as policy analysts or policy implementers, two policy capacity domains are identified as crucial. The first policy capacity domain is evaluation capacity, defined as having the skill sets and competencies to appraise the content, process and impact of different policies (Pattyn 2014; 2015). This capacity emphasises the internal capacity of individual policy workers to generate policy lessons that will inform higher level actors in the government. The second policy capacity domain that is important at the micro level is analytical capacity. Analytical capacity closely resembles evaluation capacity, but emphasises on both the inward and outward ability to acquire, process and utilise knowledge for policy-making (Clare and Creed 2014; Elgin and Weible 2013; Newman et al 2017; Rayner et al 2013; Saguin 2016; Shroff et al 2017; Williams and McNutt 2013).

Level of capacity	Key actors	Capacity domains	Definitions/Operationalisations
Macro (System)	International pacts/ alliance Regional pacts/ alliance National government Sub-national government	Institutional capacity	<ul style="list-style-type: none"> Capacity to adopt policy ideas and make intelligent choices in the design of policy. Capacity to make strategic policy decisions and steer systemic adoption of those decisions.
		Administrative capacity	<ul style="list-style-type: none"> Capacity to identify, formulate and implement policy decisions and ensuring the uniformity of implementations.
		Regulatory capacity	<ul style="list-style-type: none"> Capacity to monitor and enforce established rules and procedures via a distinct regulatory structure.
		Fiscal capacity	<ul style="list-style-type: none"> Capacity to control government spending through the monitoring of financial operations, making sound long term budget decisions, improving budget process and transparency, and achieving structural balance. Capacity to collect and raise revenues from taxes in accordance to the tax policy for public consumption.
		Financial capacity	<ul style="list-style-type: none"> Capacity to generate additional revenues. Capacity to control and regulate economic activities.
		Political capacity	<ul style="list-style-type: none"> Capacity to mobilise societal support and consent in the pursuit of different policy goals. Capacity to coordinate and control diverging interests to compromise in the policy process.
Mezzo (Organisation)	Governmental departments Autonomous public organisations Non-profit organisations	Institutional capacity	<ul style="list-style-type: none"> Capacity to develop strategic direction to enhance organisational performance.
		Administrative capacity	<ul style="list-style-type: none"> Capacity to implement and control different management systems including capital, financial, human resource, performance management and information technology. Capacity to identify, formulate and implement programmes or policies.
		Financial capacity	<ul style="list-style-type: none"> Capacity to maintain sustainable levels of real revenues and real assets.
		Analytical capacity	<ul style="list-style-type: none"> Capacity to utilise and develop skills required to generate insights, provide policy advice and effectively communicate these to policy decision-makers and public.
		Political capacity	<ul style="list-style-type: none"> Capacity to mobilise bureaucratic support and administrative buy-in to advance organisational goals. Capacity to coordinate and control diverging interests to compromise in the pursuit of organisational goals.
Micro (Individual)	Policy analysts Policy implementers Public servants NGO workers	Evaluation capacity	<ul style="list-style-type: none"> Capacity to appraise the content, process and impact of the policy.
		Analytical capacity	<ul style="list-style-type: none"> Capacity to acquire, process and utilise knowledge for policy-making.

Table 1: Policy capacity domains at different levels of government



Discussion

The bibliometric analysis confirmed Brinkerhoff and Morgan's (2010) assertion that the capacity literature is largely fragmented. There is scope for crafting a framework that bridges the various disciplines and authors that work on the topic. What is crucial though is to create such a synthetic framework with a common language in mind in order to drive conceptual convergence. The policy capacity framework by Wu et al is an excellent starting point as it brings together the argument by the capacity building literature that capacity should be conceived at different levels and at the same time serve as a focal point of various disciplinary biases.

The synthesis confirms that capacity is widely researched but poorly theorized. Many of the articles are empirical in nature but at least 30% (or 31) did not offer any operationalization of capacity. This finding is consistent with the point earlier made by Addison (2009) that capacity is used as a residual or a 'background concept', the absence or lack of which is used to explain failures or low performance. Thus, for these articles, the operational problem that Honadle earlier raised is not so much of the multiplicity of contexts the concept of capacity is used but more because scholars do not critically engage on the definitional issues of capacity. There appears to be a shared implicit definition of capacity pervasive in the literature.

For those that offer a definition of capacity, many lessons can be gleaned if the definitions are refracted using the lens of policy capacity using the Wu, et al (2015) framework. First, there is a focus on actors when it comes to locus of capacity. The common subject of capacity research at the system-level is the national government but there are also interest on the capacity of networks, coalitions and alliances. Second, the imperative to view capacity in three levels and dimensions is confirmed. Operational capacity as defined by Wu, et al. (2015) appears to capture different elements including financial capacity, administrative capacity and institutional capacity. Third, there are also elements that are missing. Research and operationalization of analytical capacity is largely missing at the systemic level, while operational and political capacities are not examined at the individual level.

In the typology of policy capacity we summarized earlier, we did not include state capacity as a capacity domain at the macro level. This is largely due to the fact that the literature in which state capacity was discussed remains broad and amorphous

in their operationalisations of state capacity. More often than not, the discussion on state capacity appears to be diverse rather than normative, with different definitions coined for different sub-fields with different objectives of applying this concept, making a unifying understanding of state capacity to be extremely challenging. With the intention to include all capacity definitions instead of discarding them for irrelevance, we drew all state capacity definitions and categorised them into explicit domains such as administrative capacity, regulatory capacity political capacity, regulatory capacity and financial capacity at the macro level. The disaggregation of state capacity into these other capacity domains thus enables the construction of a more refined and contextualised policy capacity framework.

The objective of the utilizing capacity (for example, to generate revenues) is usually used as a means to introduce nuance, but it appears that interactions between these conceptualizations need to be recognized. For instance, regulatory capacity (capacity to enforce rules) can be seen as a function of administrative capacity (capacity to implement policy decisions), although the difference between enforcement and implementation is still mainly up to debate. Many authors also use a nested model where capacities are used as a determinant of other capacities (see for instance Wen 2017; Saguin 2016; Kim 2018; Carbonetti, et al. 2014; Chindarkar 2017). Thus, there is an implicit relationship between these operationalizations of capacities. The nested model offered by Wu, et al. (2015) note the interaction of different capacities as some capacity paves the way for the creation of other capacities:

Factors such as trust and available personnel and financial resources are critical determinants of organizational capabilities and thus of public managers' and analysts' ability to perform their policy work. (Wu et al. 2015, 6-7)

Instead of treating these concepts as conceptually distinct, the interactions, as some scholars in the review have done, should be acknowledged, problematized, and unpacked. Wu, et al. treated policy capacity as a combination of skills and resources, however, there is need to further elaborate on this relationship. While there is a debate about how to adequately measure capacity as either input or output (Savoia and Sen 2012), there is value in acknowledging that inputs, as in the case of resources, are capacities in themselves. While inputs do not necessary determine the range of actions a certain actor can do, it can certainly shape it by making actions more desirable than others. In this sense, *input capacity* refers to the level of endowments and resources that policy actors can generate, utilize and mobilize. For instance, the notion of unfunded mandates captures the absence of input capacity, particularly financing and staffing, when legal mandates are enacted for public action without necessarily guaranteeing a steady source of resources to carry out the action. Examples of input capacity are enabling laws, rules and norms, social networks and capital, financial resources, human capital and staffing, authority and political power, trust and legitimacy, geography such as terrain ruggedness. In their article on capacity to respond to climate change, Romero-Lankao, et al. (2013) defined capacity the "broad pool of resources" that includes information, knowledge, people's participation and network and legal framework that various stakeholders can use to respond to vulnerability to the effects of climate change.

However, these inputs need to be turned into actual outputs through public action. This *process capacity* is usually what is referred to as latent and largely

unobserved unless an actual output is produced. Process capacity defines the range of policy outputs as a function of both the available inputs and the quality of processes used. *Process capacity* can thus be defined as the skills and competencies of policy actors to use the endowments and resources. For example, Carbonetti, et al. 2014 defined management capacity as the state's "ability to develop, direct and control its resources to achieve policy and program goals". Other examples of process capacity would typically include normative qualities such as free of corruption and autonomous bureaucracies. However, what is needed is the possession of the right mix of skills, attitudes and knowledge that can be properly deployed when necessary. This is where the different dimensions of Wu, et al. becomes vital. Key functions that must be performed are operational, political and analytical in nature, but the review also reveals that evaluation is an equally important function.

Lastly, the enactment of a specific process or procedure is a necessary condition for the delivery of actual policy outputs. Whether outputs can be conceived as a correct proxy for capacity has been the subject of much debate (Fukuyama 2013), outputs themselves can expand the production possibilities of organizations. For instance, organizational legitimacy can be seen as an output of institutional isomorphism (DiMaggio and Powell 1983), legitimacy can also allow organizations to access resources that were not available to them prior to not adopted isomorphism. In this sense, *intermediate outputs* can be viewed as comprising capacity itself and not just capacity-enhancing. However, these outputs should be transformative in the sense that it can be broken apart and put together to creates more opportunities to achieve policy outcomes. For example, policy analytical capacity may be viewed as based on the extent to which policy analysts are integrated into the policy process (Carson and Wellstead 2015). This allows them to coordinate policy work and analysis and allows them to ensure that their work is considered by policymakers. Examples of intermediate outputs as capacity can include legal mandate, policy integration and coordination, positive perceptions, political and institutional legitimacy and actual delivery of services.

Conclusion

The paper sought to appraise the scientific research on capacity in order to arrive at a better conceptualization of an idea central to public policy studies but remains poorly theorised after decades of vibrant academic attention to the topic. Our bibliometric analysis painted a picture of a field that is highly disjointed and warranting of cross-disciplinary collaboration. We offer a synthetic framework to serve as an initial attempt to encourage this collaboration and spur a more cohesive and convergent field. The framework is inclusive that it conceptualizes different forms of capacity within an iterative process of generating resources, developing skills and transforming outputs to pave way for further public action.

While the framework is based on a largely comprehensive attempt at appraising the field, the study is limited by what our current capacities can afford. First, the choice of software have limited our search primarily to journal articles and seminal books and book chapters may have been ignored. By looking at multiple criteria of assessing fragmentation, we hope to have to minimised this bias. More importantly, we believe the works included have captured a fairly comprehensive view of the field, more than we expected. Second, the synthetic framework is a work in progress and thus requires further elaboration. We hope though that the framework will spur discussions about

how to better integrate the literature and how to bring into the debate the issues of dynamic of policy capacity.

Further research should be performed to test the applicability of the framework. Most of the capacity studies employ qualitative research which allows the researcher to better disentangle complex relationships. For this reason, qualitative research, particularly those that documents processes and engages in causal arguments with well-defined rival explanations can serve to confirm or disconfirm the value of the framework. Quantitative researchers may have to use structural equation modelling to establish relationships between the different forms of capacity. Ultimately, what needs to be done is to check whether such a comprehensive framework offers much more to our understanding of capacity than existing approaches.

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