Journal of Institutional Economics (2025), **21**, e31, 1–20
doi:10.1017/S1744137425100192

CAMBRIDGE UNIVERSITY PRESS

RESEARCH ARTICLE

Unbundling institutions: the case for meso-institutions

Claude Ménard[1] and Gaetano Martino[2]

[1]Centre d'Economie de la Sorbonne, Université de Paris 1 (Panthéon-Sorbonne), Boulevard de l'Hôpital, Paris, France and [2]Department of Agricultural, Food and Environmental Sciences, Universita degli studi di Perugia, Piazza dell'Università, Perugia PG, Italy
Corresponding author: Claude Ménard; Email: claude.menard@univ-paris1.fr

(Received 6 November 2023; revised 28 June 2025; accepted 28 June 2025)

Abstract
The last decades have seen important progress in the economic analysis of institutions, with increasing concern about the need to 'unbundle' this concept and the diversity of situations it covers. It is so because of the complexity of the systems the concept intends to capture and the ambiguity of definitions often perceived as catch-all ideas without a clear connection to a research strategy. This essay contributes to the literature emphasising that overcoming these difficulties requires a theoretical framework identifying and characterising distinct institutional layers. The content of this framework is substantiated through the analysis of the nature and role of the long-ignored intermediate layer of 'meso-institutions'. Meso-institutions designate devices and transmission mechanisms linking general rules, norms and beliefs established at the macro-institutional level with their perception, adaptation, and implementation (or challenge) by the actors populating the micro-level. Operationalising this framework relies on a research strategy that proceeds from a 'substantive theory' of institutions to the collection and processing of 'empirical evidences' through the development of 'auxiliary theories' designed to capture specific institutional objects. References to several empirical studies support the relevance of this approach.

Keywords: auxiliary theories; institutions; measurement; meso-institutions; methodology

Introduction

This essay contributes to the ongoing literature about the need to go beyond the general statement that 'institutions matter' by developing a richer theoretical framework and a more complex methodological strategy (Al-Ubaydli et al., 2025; Ménard and Shirley, 2025; Skarbek, 2020; Voigt 2013, 2018a, 2018b).[1] It proposes a theory of institutions revising and extending the groundbreaking contribution from Davis and North (1971: 6). Taking advantage of recent analyses that have pointed out the existence and key role of 'intermediate' or 'meso-institutions' (Abbott et al., 2017b; Jacobi, 2018; Künneke et al., 2021; Ménard, 2014, 2017),[2] we submit a disentangled approach to institutions paired with an appropriate research strategy. Besides the benefit expected from focusing on meso-institutions as its point of entry, our approach is motivated by the necessity to better understand the often-neglected role in the literature as well as in policy-making of the devices and mechanisms operating as transmitters through

[1]This essay is part of a symposium on meso-institutions with contributions that substantiate its argument.

[2]To our knowledge, Misa (1994) introduced the term « meso-institutions » in the social sciences. However, Jacobi (2014) mentioned earlier contributions (e.g., Stewart 1988) about the role of 'meso-factors' in implementing macro-policies, a role her working paper conceptualised (she used the term 'meso-institutions') almost simultaneously to, independently from, and somehow differently than Ménard (2014).

which general rules, norms, and beliefs established at the macro-level interact with actors operating at the micro-level. It is hypothesised that these interactions happen through the fulfilment of functions specific to meso-institutions. Characterising these functions allows to collect and process empirical evidences about the transmission process (Bennett, 2025; Zeller and Carmines, 1980).

As illustrated by numerous empirical contributions, some referenced hereafter, different methodologies can be mobilised to build these evidences: case studies, textual analysis, statistics, econometric tests, laboratory, or field experiments (Ménard and Shirley, 2018; 2025, section VIII). A difficult question raised by this variety concerns the alignment between the methodology selected and the type of evidences to collect, with the goal of getting as close as possible to measurement. Measurement is a sensitive issue in institutional analysis. Rules, norms, beliefs, and the institutions in which they are embedded and through which they are transmitted to actors can be identified and their role assessed through qualitative analyses. When it comes to measurement, it can be argued that institutions cannot be measured directly but only through proxies related to their consequences, for example, the impact of different political regimes on development and growth (Acemoglu et al., 2019; Shirley, 2008; Weingast, 2005/2025), of food safety regulation on the quality of products delivered (Ménard et al., 2024), or of property rights regimes on entrepreneurship (Estrin et al., 2013). Whatever the position adopted on this issue, developing rigorous empirical analysis requires not only a 'substantive theory' of institutions with clearly defined concepts (Hodgson, 2006, 2015a), but also the identification of the different dimensions through which institutions actually operate, the analysis of which depends on the development of appropriate 'auxiliary theories' (Sajtos and Magyar, 2016). Auxiliary theories in the context of this essay refer to specific theories, embedded in the substantive one, that capture the functions (and related tasks) to be fulfilled by specific subsets of institutions. Auxiliary theories provide ground for developing 'hypothetical constructs' that orient the collection and processing of data needed to deliver 'empirical evidences'.

What follows explicates and substantiates this research strategy. The section on 'A research strategy' discusses challenges raised by a too broad concept of institutions, motivating a research strategy that goes beyond a substantive theory to auxiliary theories targeting more specific objects and providing support to well-structured empirical investigations. The section on 'A substantive theory of institutions' digs into selected contributions to delineate the substantive theory of institutions adopted. The section on 'Disentangling the concept of institutions: towards auxiliary theories' argues that making this substantive theory suitable to relevant empirical studies requires its unbundling, leading to the identification of institutional 'layers' captured through auxiliary theories that complement the general one. The section on 'Meso-institutions: building their auxiliary theory' substantiates this approach through the analysis of the intermediate, meso-institutional layer that connects macro-institutions to micro-actors and fulfils this role through the accomplishment of functions and tasks that define a specific auxiliary theory. The section on 'From auxiliary theory to hypothetical constructs and empirical investigation' shows how the identification of these tasks allows building hypothetical constructs that sustain rigorous empirical investigations. The 'Discussion and relevance' section discusses benefits and limits to this approach. The 'Conclusion' section concludes.

A research strategy

Because it captures so many distinct phenomena, the concept of institutions and the theories in which its definitions are embedded face serious challenges when it comes to assessing the nature and role of specific institutions. Some inspiring contributions have particularly pointed out the complexity of 'institutions' as a research topic (Al-Ubaydli et al., 2025; Alston et al., 2025) and the ambiguity of its definition and related concepts (the concept of 'measurement' raises similar problems; see Tal, 2020). Building on contributions from economics and other social sciences, we propose a methodological strategy to (partially) circumvent these difficulties, proceeding from the adoption of a substantive theory of institutions all the way to the collection of empirical evidences.

https://doi.org/10.1017/S1744137425100192 Published online by Cambridge University Press

Conceptual challenges: complexity, ambiguity

Difficulties in bridging the gap between a substantive theory of institutions and empirical evidences come from the complexity of the object of the theory and from ambiguities that blur many concepts it mobilises.

Complexity

'[S]ystems composed of a cluster of variables' (Ostrom, 2010: 640) that continuously interact, with no proportionality between cause and effect (Alston et al., 2025, chap. 1), 'institutions' designate 'complex systems' (Page, 2009; Weaver, 1948). As can be expected, a substantial theory of institutions intending to capture such systems will develop highly complex representations. However, the more comprehensive a theory intends to be and the more extended the set of phenomena it intends to cover, the more severe the difficulties it faces in matching theory with observations that are necessarily more specific. For instance, consider the representation of institutions in New Institutional Economics (NIE) and the complex interaction among its foundational concepts of property rights, transactions costs, and contracts (Ménard and Shirley, 2022; for a discussion of the methodological issues at stake, see Al-Ubaydli et al., 2025).

To deal with the remoteness of such complex and general theories from specific subsets of phenomena, Merton (1968) emphasised early on the need to develop 'middle-range theories', an influential and debated proposition in social sciences (Boudon, 1991; Kaidesoja, 2019). In Merton's words (1968: 39–40):

> 'Middle-range theory is principally used in sociology to guide empirical inquiry. It is intermediate to general theories of social systems which are too remote from particular classes of social behavior, organization, and change to account for what is observed and to those detailed orderly descriptions of particulars that are not generalized at all. Middle-range theories involve abstractions, of course, but they are close enough to observed data to be incorporated in propositions that permit empirical testing. Middle-range theories deal with delimited aspects of social phenomena, as is indicated by their labels.'

By introducing the concept of 'middle-range theory', Merton intended to make general theories more tractable and prone to testing by developing specific subsets of concepts focused on specific issues. This objective concurs with a literature running from North (1990) to Alston et al. (2025) about the need to 'unbundle' the concept of institutions to make it amenable to empirical investigations.[3] Middle-range theories, better qualified as 'auxiliary' theories since they are embedded in and complement a general theory, play the role of 'go-between' designed to overcome complexity by linking the substantive concept of institutions to empirical evidences, which need theories better suited to the analysis of 'particular classes of social behavior, organization, and change'. This essay builds on recent contributions to go beyond Merton's proposal, which does not tell much about how a middle-range theory allows connecting 'abstractions' and 'observed data'. We shall argue that this is precisely the key role of auxiliary theories as a source of hypothetical constructs.

[3]The often-quoted paper by Acemoglu & Johnson (2005) on 'unbundling institutions' differentiates 'contracting institutions' from 'property rights institutions', each commanding different status for state-sponsored institutions. We are indebted to a referee who pointed out this distinction. However, we do not share his/her conclusion that this 'horizontal unbundling' goes against the 'vertical unbundling' of institutional layers developed in our essay. From the perspective adopted hereafter, the 'horizontal' distinction between contracting and property rights institutions can well be declined with different characteristics along the different layers of the 'vertical' unbundling.

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Ambiguity

Besides the complexity coming out of the multiple dimensions embedded in a substantive theory, complications can arise from ambiguities in the concepts it mobilises. Indeed, general concepts intend to capture different facets of a problem (e.g. property rights, their nature, their variety, their role), making them at risk of becoming blurred because of their abstract nature, their extended scope (Ravitch and Carl, 2021), and the resulting language ambiguities (Sartori, 2009). For instance, the concept of property rights covers a wide range of forms (Alchian, 1965; Barzel and Allen, 2023, chap. 3; Smith, 2021), leading to ambiguity in its meaning. This is observable in economics where it is quite systematically identified to private property rights, a source of confusion and misinterpretation.

To escape this ambiguity trap, theories provide definitions intending to align concepts with the phenomena they target. However, definitions are inherently comprehensive, drawn to capture as extensively as possible the properties of the phenomena to which they refer, so that they entail many features (Sartori, 2009). Consequently, they make room for a variety of interpretations, a potential source of confusion in the selection of indicators, or data, or cases that could rigorously substantiate the theory. To illustrate, consider the difficulties of defining what an incomplete contract is, assessing what makes it incomplete, and measuring the intensity and consequences of this incompleteness (Gil and Zanarone, 2025). Disentangling the components of the general concept of institutions allows introducing more specific concepts, thus reducing, if not totally eliminating, ambiguities (for a converging view see Sindzingre, 2006). It also helps build a coherent research strategy.

A research strategy: tightening the bolts

The research strategy proposed hereafter does not start from scratch. It builds on numerous contributions, from economists as well as other social scientists, some already mentioned. We selected contributions that we found particularly helpful for developing a more systematic approach to institutions and for leading to a strategy that throws light on how generic institutions (e.g. contract laws) interact with the actual organisation of transactions and the behaviour of actors operating within the field thus delineated. Although what follows largely remains at the abstract level, references to empirical contributions (including from this symposium) substantiate the approach.

We already referred to the idea of *substantive theories* of institutions. A substantive theory introduces articulated and interdependent concepts that frame the general object of analysis and the protocol to investigate this object. For instance, NIE proposes a substantive theory of institutions based on the fundamental concepts of property rights, transactions, and contracts (Ménard and Shirley, 2022; North, 1990), opening avenues to the analysis of the role of property rights in development and growth by comparing their implementation through customs versus laws (Bowles and Choi, 2025; Rose, 1994; Shirley, 2008).

However, when it comes to understanding how such institutions play their role under various regimes, for example, how property rights at the core of capitalism and its development operate distinctly according to the political regime in which they are embedded (Alston et al., 2025; Hodgson, 2015b; North, 1990), the broad concept of institutions needs to be disentangled, opening room for 'middle-range theories' (Merton 1968), 'models of empirical analysis' (Ostrom, 2005a), or 'auxiliary theories' (Sajtos and Magyar, 2016), the terminology adopted hereafter. *Auxiliary theories* designate subsets of concepts and modalities of their operationalisation targeting specific classes of social phenomena. For instance, the transfer of property rights in a developed market economy depends on specific devices (e.g. courts as enforcers in last resort) and mechanisms (e.g. contractual agreements) that require interpreting the general concept to capture how these rights frame the actual organisation of transactions (e.g. in the context of public–private partnerships – de Vries and Yehoue, 2013). This step imposes moving from the abstract and substantive theory of, say, how property rights are established or modified by a parliament in a democratic regime, to auxiliary theories defining the modalities of their implementation in specific contexts and time and providing ways to assess their impact on organisational choices made by actors when they decide to invest (Acemoglu and Johnson,

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2005; Acemoglu et al., 2019). Because they capture different classes of phenomena, auxiliary theories likely differ according to the institutional layer to which they connect (see the section on "Disentangling the concept of institutions: towards auxiliary theories").

Auxiliary theories represent a crucial step in a research strategy in that they allow to establish hypothetical constructs. *Hypothetical constructs* connect concepts to procedures designed to collect empirical evidences that support or challenge propositions rooted in auxiliary theories. These constructs are hypothetical in that they propose ways to identify attributes (qualitative analysis) or variables (quantitative analysis) connecting *empirical evidences* to questions raised by a substantive theory boiled down to the more specific questions embedded in the relevant auxiliary theory. Illustrative is the passage from the analysis of the central role of transactions in a market economy to the more specific theory of transaction costs and the hypothesis, empirically testable, that these costs play a key role in the decision to vertically integrate (or not) in a given industry (Joskow, 2005/2025).

The methodological steps thus identified suggest a continuing process of interaction between theoretical questions and empirical investigations. Figure 1 summarises these steps and their interactions.[4]

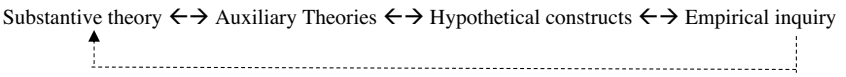

Figure 1. Research strategy.

The following sections submit an analysis of institutions that goes through these four different steps, substantiated by the illustrative and long-neglected case of meso-institutions.

A substantive theory of institutions

The starting point requires defining a *substantive theory* of institutions. Unfortunately, there is no universally accepted concept of institutions. Their composite nature (Ostrom, 2005a; Sindzingre, 2006) and the diversity of their conceptualisation (Jupille and Caporaso, 2022) mirror the complexity of issues under scrutiny and the ambiguities in language intending to capture this complexity. What follows does not pretend to deliver a final answer to these challenges. It rather focuses on selected contributions providing means to identify and understand those institutions that implement, enforce, and adapt general rules and norms to specific contexts and potentially transform them through their interactions with actors.

Preliminaries

The substantive theory of institutions endorsed in this essay comes mainly, although not exclusively, from new institutionalists. Indeed, founders of NIE (a term coined by Williamson, 1975: 1; see also Coase, 1998) as well as contributors referring to the 'original' institutionalism (e.g. Hodgson, 2014) repeatedly emphasised the need for a well-defined concept to circumvent the risk of making the theory tautological or incorporating so many dimensions that it becomes useless. In doing so, they implicitly follow historians and philosophers of sciences (e.g. Canguilhem, 1968/2019, Introduction and 305 sq.), who emphasise how determining the scope and extension of a concept frames scientific agendas.

A classic reference goes back to Davis and North (1971: 6–7) who distinguished the '*institutional environment*', defined as 'the set of fundamental political, social, and legal ground rules that establishes the basis for production, exchange and distribution', from an '*institutional arrangement*', understood as

[4]A reviewer suggested similarities with the step-by-step method promoted by Knight (1921) and discussed in Bylund (2021).

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'an arrangement between economic units that govern the ways in which these units can cooperate and/or compete' (italics from 1971). North (1990: 3–5) later revisited this approach, qualifying institutions as 'the rules of the game in a society or, more formally, the humanly devised constraints that shape human interactions',[5] while 'institutional arrangements' became 'organizations', defined as 'group of individuals bound by some common purpose to achieve objective', thus becoming the 'players of the game'. However, this change sidelines the institutional dimension of organisations. Organisations also produce rules that frame the behaviour of actors although with a different level of generality than those established at the macro level. In messages exchanged with Hodgson (September-October 2002), North acknowledged the resulting ambiguity. Although pleading to keep the term 'organization' to designate the teamed-action of players at the micro-level, he suggested that 'for certain purpose we can consider organizations as institutions', following Hodgson's idea that 'organizations are a special type of institutions' composed of 'internal players and systems of rules' (Hodgson, 2006, appendix). The analysis developed hereafter capitalises on this exchange: it sticks to a strict usage of the concept of organisations, designating those institutionally embedded arrangements through which 'players of the game' jointly structure the governance of their action, typically through transactions.

This approach fits with the breaking contribution of Williamson (1975). While Davis and North (1971) led their followers to focus on the macro-institutional layer in which formal laws and rules and informal or semi-formal norms of behaviour are established, Williamson invested the other side of NIE, developing a 'micro-theory' centered on those 'institutional matrices' in which transactions are drafted, negotiated, formalised ex-ante (e.g. in a contract or a code of procedures) and adapted ex-post to deal with unexpected events (Williamson, 1975, chap. 1; 1996: 378–379). This essay endorses this conception of organisations, viewed as an essential component of a broader micro-institutional layer (e.g. including religious or political organisations).

Another important building block in the development of a substantive theory of institutions comes from the often-neglected contribution of Schotter (1981: 10–11) who pioneered the effort to formalise the concept of institutions, shifting the attention to their micro-foundations. Sharing a game-theoretic background, Schotter defined institutions as equilibria. Institutions would come out of regularities of behaviour R resulting from the strategies of a population P of agents A who share common knowledge about how to solve coordination problems while being aware of the consequences of deviant strategies on the outcome, a central condition to institutional stability. This reference to the key role of common knowledge makes explicit that it is 'the expected behavior of others, rather than the rules itself, which motivates people's behavior' (Greif and Kingston, 2011: 14–15). The emphasis is therefore on the conventional nature of institutions, which makes rules self-enforcing, as opposed to the Northian view of institutions as rules and norms operating as coordinating devices, with enforcement a separate issue. The literature then ends up with alternative substantive theories of institutions, analysed either as self-enforcing equilibria rooted in agents' behaviour (Greif, 2005/2025; Schotter, 1981) or as the historically developed set of rules and norms that frame agents' behaviour (North, 1990; Ostrom, 2005a, 2005b). However, while the rules and norms approach faces the limitation of treating enforcement as exogenous, the equilibrium perspective makes enforcement entirely dependent on behavioural assumptions, leaving in the dark the devices and mechanisms through which regularities and coordination operate.[6]

A synthetic approach

Notwithstanding substantial differences, these two approaches show some complementarity (Greif and Kingston, 2011: 38 sq.). Taking inspiration from Hurwicz (2008), the following representation (Figure 2) synthesises some key elements of both theories.

[5]Notwithstanding his claimed filiation with the 'original' institutionalism, Hodgson comes close to North when defining institutions as 'integrated systems of rules that structure social interactions'. (2015a: 501).

[6]See Greif & Kingston (2011) and Hodgson (2015a) for the merits and limitations of each approach.

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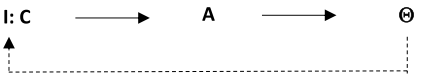

Figure 2. A synthetic representation of substantive theories of institutions.

Let **I** be the set of rules and norms embedded in devices and mechanisms **C** that frame the conditions under which agents or classes of agents **A** coordinate to deal with states of nature **Θ**. To avoid misunderstanding, the expression 'states of nature' can refer to physical, economic, social, and ideological components of an institutional environment. Analysing these components, their interactions, and the loop between the states of nature that agents are facing and the existing institutions defines the broad object of substantive theories (e.g. a theory of economic systems comparing the institutions of a market economy versus a centrally planned economy). It also helps to better understand the mix of components endogenous to agents (behaviour, whether individual or collective) and exogenous to agents (institutional devices and mechanisms). Hence, we hereafter consider institutions as *the set of norms, rules, and beliefs embedded in devices and mechanisms that emerge from interactions among agents (or classes of agents) in search of coordination to deal with states of nature.* This definition is close to North (1990: 3–5) and Hodgson (2015a: 501), among others.

However, remaining at this general level exposes to the risk of targeting too complex issues or to maintain ambiguities regarding the object of analysis. Investigation needs to go further: to become analytically operational, this general concept must be unbundled through the identification of different layers it encompasses (Ménard, 2009). For instance, as pointed out by Barzel (1982; 2000), Ostrom (2005a), Hurwicz (2008), North et al. (2009), to mention a few, more attention needs to be paid to the transmission mechanisms supporting the interactions between general rules, norms, beliefs and the behaviour of actors, mechanisms that can operate both ways. The next sections contribute to this research agenda. However, to make the analysis less abstract, it focuses on the neglected intermediate institutions central to the implementation, adaptation, and enforcement of general rules, norms, and beliefs.

Disentangling the concept of institutions: towards auxiliary theories

A metaphor repeatedly used by North (e.g. 1990: 4; 2005: 48) provides a useful intuition to introduce the dimensions encapsulated in the generic concept of institutions. American football follows a set of rules established over time that make it distinct from other sports, for example, soccer or baseball. However, knowing these rules (and their differences) is not enough to understand how games are actually played. Without umpires to adapt, monitor, and enforce these rules, football matches (or other sports in that respect) would end in chaos. Umpires fulfil essential functions that frame the actual domain of action of the players within the general rules of the game. The lesson from this metaphor overlaps partially with Williamson's (2000) proposition to differentiate institutional layers according to their lifespan, and with Ostrom (2005a, 2005b; 2014) who asserted that institutions differ according to the nature and span of the rules they define and implement.

Identifying institutional layers: breaking contributions

In a synthesis of his conception of NIE, Williamson (2000: 596 sq.) identified four levels in the 'social analysis' of institutions: (1) the level of their embeddedness in 'norms, customs, mores, traditions' that change very slowly over time and would correspond to North's informal norms; (2) the level of formal rules such as constitutions, property rights, or contract laws, which Williamson considers the outcome of long-run evolution, with 'defining moments' of radical changes rather exceptional; (3) the level of 'institutions of governance', in which contractual

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relations and their key role in organising transactions become 'the focus of the analysis'; and (4) the level of the neoclassical 'marginal analysis', which primarily considers short-term mechanisms of allocation of resources, particularly, prices and incentives. Although the typology proposed hereafter partially overlaps with Williamson's, we take distance from his differentiation of institutional levels according to their time span and 'frequency' of changes. For instance, several examples suggest that 'informal' norms and customs might well change more rapidly than the 'formal rules of the game' (see Shirley, 2008, chap. 7). In that respect, we consider the Northian distinction between the general rules (both informal and formal, levels 1 and 2 in Williamson) and the entities and actors operating within these rules (levels 3 and 4 in Williamson) a better starting point to explore institutional settings. Moreover, in Williamson's typology, the modalities of interactions among levels remain a black hole, which is also a problem with the North dichotomy. Several theoretical as well as empirical studies rather suggest the central role of these interactions for understanding how institutions work and change over time (Ménard, 2017; Greif, 2006). Nevertheless, Williamson's important contribution reinforces North's intuition of 1990 on the existence of distinct institutional layers operating through different types of rules and norms.

This is exactly what Ostrom (2014) emphasised in a contribution published after she passed away (see also 2005b/2025 section 5). Her definition of institutions as human constructs based on rules that frame 'required, prohibited, or permitted' actions (Ostrom, 2005b/2025: 85) overlaps with North and Hodgson referenced above. However, she went further in making explicit a red thread unifying her previous publications: different rules operate at different institutional levels, and these levels interact. This perspective underlies the series of empirical studies she initiated, embedded in her 'Institutional Analysis and Development' (IAD) framework, about how different layers of rules interact through 'actions situations'.[7] More precisely, she opened 'the black box called rules' with the explicit purpose of bringing 'some order to the massive number of specific rules that one could analyze' (2014: 8). She does so by distinguishing three fundamental levels of rules. The first level comprehends 'operational-choice rules' in which agents interact to organise their activities; the second level encompasses 'collective-choice rules' that provide guidance to players operating in specific environments; and the third level includes 'constitutional-choice rules' delineating the field within which games can be played.

Referring to Figure 2, we derive from these contributions the proposition summarized in Figure 3 that any substantive concept of institutions **I** integrates different subsets of institutions $\mathbf{I}_{\mu}$ ($\mathbf{I}_{\mu} \in \mathbf{I}$), characterised by specific devices and mechanisms **c** ($\mathbf{c} \in \mathbf{C}$) through which different sets of rules and norms frame the way specific agents or classes of agents **a** ($\mathbf{a} \in \mathbf{A}$) deal with specific states of nature $\boldsymbol{\theta}$ ($\boldsymbol{\theta} \in \boldsymbol{\Theta}$), the interaction of agents and state of nature generating behaviours that might induce changes in the relevant institution(s).[8]

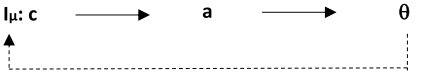

Figure 3. Towards auxiliary theories.

Substantiating the content of these different subsets $\mathbf{I}_{\mu}$ requires the development of auxiliary theories that characterise these layers and their associated devices and mechanisms. We now turn to this next step in our research strategy.

[7]For a stimulating discussion of Ostrom on this issue, see Greif & Kingston (2011).

[8]The interactions between institutions and agents confronted with different states of nature can be illustrated by the relationships between entrepreneurs and institutions at a point in time (Elert & Henrekson 2016) or over time (Bylund & McCaffrey 2017).

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Towards auxiliary theories

The contributions summarised above (and many others, e.g. Acemoglu and Johnson, 2005; Jacobi, 2014, 2018; Ménard, 2014; Sindzingre, 2006; Voigt, 2018a, 2018b) pointed out the need to develop a less 'aggregated' view of institutions. The comparative advantage of the layers of rules *à la* Ostrom (2014) in conjunction with lessons drawn from Williamson (2000) comes from their effort to unbundle the substantive theory of institutions by reference to concepts from NIE. However, their characterisation of the layers remains vague. What is missing are specific auxiliary theories to better define the respective roles and functions of each layer, opening room for better structured empirical research.

This is particularly obvious when it comes to the long-neglected institutions bridging the gap between the layer at which formal and informal rules and norms are established and the layer at which actors make choices. Two sets of recent publications deserve special attention for their effort to identify the functions through which meso-institutions play this role of 'go-between'. (1) Scholars with a strong background in the analysis of public policies and regulatory issues proposed differentiating instances in which general rules are developed (e.g. regulatory institutions), the intermediate institutions adapting these rules to specific environments, and the actors playing within the field thus delineated. The resulting 'Regulatory-Intermediary-Target' or R-I-T model (Abbott et al., 2017b) developed an auxiliary theory of the intermediate institutions (see the section on "Meso-institutions: building their auxiliary theory") that led to a rich set of empirical studies, mainly on regulated industries, for example, the pharmaceutical industry (Maggetti et al., 2017) or the oil and gas sector in Norway (Sabel et al., 2018).[9] (2) Almost simultaneously and following discussions among new institutionalists (e.g. Greif and Kingston, 2011) as well as with authors inspired by the 'original' institutionalists (Hodgson, 2015a), Ménard (2014) and Künneke et al. (2021) explicitly introduced an auxiliary theory of meso-institutions bridging the gap between the macro-layer of the 'institutional environment' and the micro-layer of 'institutional arrangements'. As the R-I-T model, this approach also inspired numerous empirical studies, from the analysis of public utilities (Ménard, 2017) to the agri-food sector (Ménard et al., 2024) or environmental policies (Dries and Splinter, 2025; Vinholis et al., 2021). Notwithstanding differences, these contributions concur in the special attention paid to the intermediate layer.

Künneke et al. (2021) proposed a theoretical framework to capture the properties of each institutional layer ($\mathbf{I}_{\mu}$ with $\mu = 1, 2, 3$) through auxiliary theories characterised by the functions each layer is expected to fulfil. Consider the usage of pesticides in agriculture. In the European Union, a specific macro-institutional environment (e.g. distinct from the US), directives regulating pesticides routinely delegate their implementation and adaptation to national agencies or public bureaus (the meso-layer) defining protocols and/or guidelines that farmers, cooperatives, and other actors (components of the micro-layer) must follow in order to reduce pollution.

Figure 4 summarises this framework with short indications about the respective role of the institutional layer establishing rules and norms ($\mathbf{I}_1$), implementing and adapting them to specific contexts ($\mathbf{I}_2$), and operationalising them through the action of micro-entities ($\mathbf{I}_3$). Notwithstanding relevance for other social sciences, the figure focuses mainly on economic settings and suggests the existence of overlapping areas.

[9]More in *The Annals of the American Academy of Political and Social Sciences*, 2017: 670 (1) and the special issue of *Regulation and Governance*, 2018: 12 (3), followed by numerous contributions inspired by the R-I-T model and hosted by this journal.

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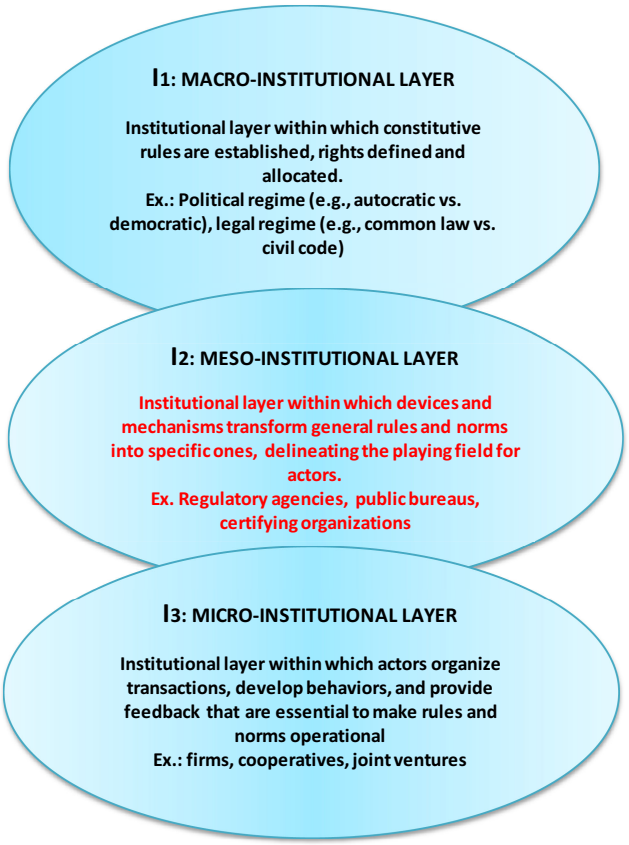

Figure 4. Institutional layers.

Meso-institutions: building their auxiliary theory

There is already an abundant literature on the macro- and micro-institutional layers (recent contributions in Acemoglu and Robinson, 2012; Alston et al., 2018; Gibbons and Roberts, 2013; Hodgson, 2015b; Ménard and Shirley, 2022, 2025). We focus hereafter on the underexplored meso-institutional layer ($\mathbf{I_2}$). In accordance with our research strategy, this layer requires a differentiating auxiliary theory that can deliver hypothetical constructs opening avenues for specific empirical studies.

An auxiliary theory of meso-institutions

As suggested in the introduction and by Figure 4, meso-institutions designate those devices and mechanisms that bridge the gap between the macro- and the micro-institutional layers. For instance, a Parliament can adopt a law establishing the general conditions allowing public–private partnership as an alternative to a public monopoly or to full privatisation for the delivery of 'utilities'. However, these constitutive rules, determined within the macro-institutional layer, need interpretation and adaptation to substantially different sectors: rules and norms regarding the implementation of PPPs (Public-Private Participation) in urban water systems significantly differ from those in public transportation.

Still, the 'translation' of general rules and norms into specific ones follows a relatively standard pattern. In their R-I-T model, Abbott et al. (2017a: 7–8) characterise 'intermediate' institutions (**I**) by the way they link general 'rules' and rule-makers (**R**) and their 'targets' (operators and users **T**) through the accomplishment of three key functions: (1) 'translating [rules] into practical forms useful to targets,

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providing assistance to targets, and evaluating alternative modes of implementation'; (2) monitoring compliance; and (3) 'creat[ing] dialogue and trust between regulators and targets and communities of practice and compliance among targets'. Almost simultaneously, Ménard (2014, 2017), followed by Künneke et al. (2021, chap. 2), developed in similar terms an auxiliary theory of meso-institutions embedded in the substantive theory of institutions *à la North* (1990). Following these contributions, this essay considers as meso-institutions *the devices and mechanisms through which general rules and norms established at the macro-layer are interpreted and/or adapted, monitored, and enforced, thus structuring the specific domain within which agents organise their activities*. Numerous empirical studies, including from this symposium, substantiate this characterisation.

First (function F_1), meso-institutions *'translate' and/or adapt* general rules and norms into context-specific ones, which condition their acceptability by micro-actors. For instance, rules adopted by the European Parliament restricting the usage of pesticides must be interpreted and adapted to different agricultural sectors and environments through the different institutions from member-countries, according to the 'subsidiarity' principle. Second (function F_2), meso-institutions *monitor* the operationalisation of these rules and norms, making them appropriate by getting feedback from those actors who actually organise the production and distribution of goods and services. To fulfil this function, information must be collected and guidelines delivered to operators and users populating the micro-institutional level. For instance, a public bureau might elaborate and monitor contractual agreements between processors and farmers' organisations to support compliance with environmental standards. Third (function F_3), meso-institutions must be endowed with the power to *enforce* rules and norms, guaranteeing their respect by operators while simultaneously providing feedback to policy-makers about the obstacles they may face or even their irrelevance for a specific environment. Enforcement requires the capacity to penalise non-complying actors or to reward those respecting the rules (e.g. through quality certification) while providing channels of communication between operators and policy-makers so as to lower the transaction costs of implementing rules and norms. Figure 5 summarises these key functions.

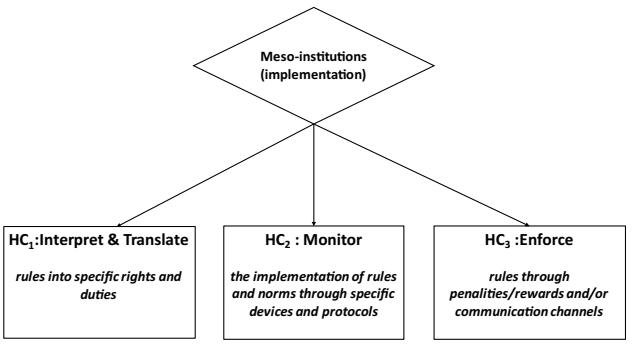

Figure 5. Functions characterising meso-institutions.

Contrasting meso with the other institutional layers

Although the full development of this model exceeds the limited scope of this essay (more in Künneke et al., 2021), operationalising the auxiliary theory of meso-institutions requires considering how they differ from and sometimes overlap with the other layers.

Differences . . .

Meso-institutions differ from macro-institutions in that the latter designate settings within which 'constitutive rules' and norms are established, rights defined and allocated, and the general conditions

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of their enforcement determined.[10] By contrast, meso-institutions primarily adapt these rules and norms to specific domains and circumstances varying in time and space. In doing so, they may generate specific rules and norms, impacting the behaviour of actors. For instance, a law (macro-level) defining safety standards in the oil industry differs from how these rules are actually implemented, for example, through a regulatory agency establishing protocols that vary depending on whether extraction is from land or ocean. As a result, meso-institutional ruling might overlap with macro-institutional ones, as when the inflection of a general rule by a regulator alters the behaviour of actors involved.

Symmetrically, meso-institutions differ from micro-institutions in that they shape the actual playing field within which the latter organise the creation of economic value.[11] By contrast with firms, etc., meso-institutions do not organise transactions supporting the creation of goods and services; they rather establish conditions and potentially sustain those micro-institutions generating value through the organisation of transactions. However, there are situations in which these layers might overlap. For instance, the implementation of rules and norms can be delegated totally (as in self-regulation) or partially (as in co-regulation) to micro-institutions, transferring the fulfilment of meso-institutional functions to micro-players (see Ciaian and di Marcantoni, 2017; Künneke et al., 2021, chaps. 2 and 4; and Jensen and Ménard, 2024).

. . . and potential ambiguities.

Such ambiguities emerge because in the 'real world', functions belonging to different layers and entities in charge of fulfilling them often overlap.[12] Although it makes sense for theory to consider sharp distinctions, the complexity of its objects often leads empirical research to operate in the blurred areas of overlapping layers (Greif and Kingston, 2011; Jacobi, 2018; Voigt, 2018a).

One potential source of ambiguity is inherent in the very concept of rules. As repeatedly pointed out by Ostrom, different rules (and norms and beliefs) entail different degrees of generality. For example, a law can impose safety standards on all vehicles operating on the national territory, while firms specialising in transportation may impose more restrictive norms on their drivers. Hence, the need to go beyond the generic idea that rules and norms of the meso-level are 'lying between macro and micro phenomena' (Jacobi, 2014: 1). The characterisation of meso-institutions through the functions they are expected to fulfil allows understanding how general rules and norms become specific (Ménard et al., 2010). Consider an agency responsible for implementing norms adopted by a government to regulate nuclear plants. This agency is expected to 'translate' constitutive rules, for example, norms of security imposed on all firms, into norms adapted to specific types of nuclear plants, corresponding to the 'policy rules' of Ostrom (2014). Moreover, these norms need adaptation when it comes to peculiar situations (e.g. a nuclear plant on the seashore versus one located deep inland). In sum, different sets of rules belong to different institutional layers depending on the degree, scope and time of their systemic relevance (Ostrom, 2005b, 2014). The distinction between macro, meso- and micro-layers allows conceptualising these differences, reducing ambiguities.

A second source of potential ambiguities comes from the concept of organisation. Broadly understood, organisations (like rules) play a role in all institutional layers, each layer requiring devices for the exercise of its functions. A parliamentary committee discussing and screening projected laws belongs to 'legislative institutions' (Weingast and Marshall, 1988); it also shares characteristics of an organisation. As with 'rules', sticking to a vague representation of 'organizations' present in all layers does not help understanding how an economy operates. To circumvent the polysemic meaning of 'organization', our model endorsed upfront the prevailing concept in the economics of organisations in which organisations designate those micro-institutional devices through which players of the game structure their actions. Transactions in this context are understood as the transfer across a technologically separable interface of the rights to use goods and services in order to produce and exchange (Williamson, 1996: 379).

[10]On the origins of macro-institutions, see Bowles & Choi 2025.

[11]However, meso-institutions may create other types of value (e.g., societal norms).

[12]Ambiguities might also help understanding institutional uncertainty and change.

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From auxiliary theory to hypothetical constructs and empirical investigation

However, dissipating ambiguities and substantiating auxiliary theories requires digging deeper into the specific functions characterising each institutional layer. Decomposing these functions into specific elements makes room for hypothetical constructs on which to build variables, leading to empirical exploration.[13]

Towards hypothetical constructs: defining tasks

Hypotheses correspond to 'a provisional supposition [or conjecture] which accounts for known facts, and serves as a starting point for further investigation' (*Oxford English Dictionary*1973). To analyse how meso-institutions bridge the gap between constitutive rules and how micro-actors actually operate, we make the key conjecture that different tasks must be accomplished for a meso-institution to fulfil its functions. The subsets of tasks associated with a specific function thus lead to the hypothetical constructs guiding empirical investigations.

To illustrate, let us come back to the three functions (F_1, F_2, F_3) characterising the auxiliary theory of meso-institutions. Again, let us take the specific issue of how the restricted usage of pesticides imposed by a law from the European Parliament (macro-layer) is interpreted and adapted to specific contexts (different geographical areas, different crops, etc.). Hypothetical constructs then refer to those tasks associated with the relevant function (e.g. F_1) fulfilled by a specific meso-institution (e.g. a regulatory agency or a farmers' organisation) to assure that micro-actors (e.g. farmers) perceive and understand the standards determined by the law. Similarly, the enforcement of these restrictions (function F_3) requires incentivising farmers to comply, for example, through supervision by a public entity or, alternatively, by delegation to farmers' organisations. The task of incentivising then leaves way to specific hypotheses regarding how to better secure compliance, for example, assigning enforcement to a regulator using penalties and rewards that target individual farmers versus adopting mechanisms that favour collective action to control externalities (Dries and Splinter, 2025).

Numerous other case studies provide indications on tasks to be fulfilled for meso-institutions to play their role, for example, tasks expected from a regulator to secure the delivery of drinkable water (Jensen and Ménard, 2024; OECD, 2015;); or to guarantee food safety in the agri-food sector (Ménard et al., 2024; Ménard et al., 2024); or to efficiently enforce environmental policies (Dries and Splinter, 2025; Oliveira and Schnaider, 2025; Vinholis et al., 2021). Based on these empirical studies, we conjecture hypothetical constructs characterised by tasks whose accomplishment determines whether related functions fully and efficiently fulfil their role (Figure 6).

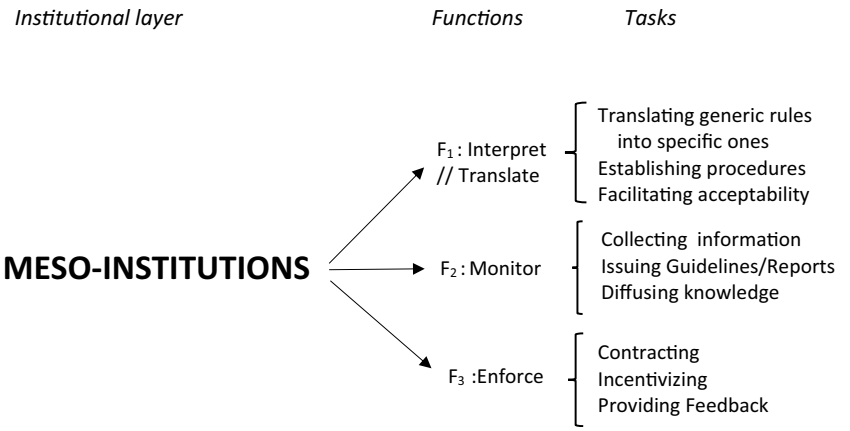

Figure 6. From auxiliary theory to hypothetical constructs.

[13]On the role of decomposition in scientific research strategies, see Bechtel & Richardson (2010).

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Empirical investigation: from assessment to measurement

The diversity of hypothetical constructs likely commands different approaches to empirically assess how far a meso-institution goes in fulfilling its functions. Taking tasks associated with these constructs as a starting point for empirical investigations faces numerous challenges. First, the list of tasks might not be exhaustive, while some tasks might be irrelevant for specific objects of investigation. Second, the definition of these tasks may suffer from ambiguities, raising issues about which variable to select. Third, the same task might be approximated through different methodologies. For example, the effect of incentives on compliance with macro-rules might be assessed through comparative case studies (Dries and Splinter, 2025) or through a field experiment (Al-Ubaydli et al., 2025), with results not necessarily converging.

Notwithstanding these challenges, the ultimate goal of empirical investigations remains to assess and measure the capacity of specific meso-institutions to fulfil their functions and associated tasks in order to reach an expected outcome. Although measurement is the key to a scientific approach, economics, like other social sciences, faces trade-offs between competing empirical strategies (Al-Ubaydli et al., 2025; Breiman, 2001; Goertz and Mahoney, 2012). Beyond variations on its meaning, there is nevertheless convergence in considering measurement as an empirically controlled approximation of variables or attributes defined under the guidance of a theory (Tal, 2020: 20). However, approximation can follow different paths.

Examining alternative methodologies appropriate to assess the different tasks identified above by far exceeds the scope of this essay.[14] The sharp distinction often made between qualitative and quantitative approaches (Goertz and Mahoney, 2012; Skarbek, 2020) provides useful insights. In NIE, the difference between the Williamsonian theory of the trade-off between alternative organisational solutions, leading to quantitative analysis, and the Northian theory of informal versus formal institutions, leading to qualitative analysis, is illustrative. However, the distinction might overstate the polarisation of methodological practices, which often fruitfully operate in the blurred area between qualitative and quantitative. Recent technological developments (e.g. text analysis through Artificial Intelligence) make methodological frontiers even more porous, opening new ways to explore institutions and their internal dynamics (Grajzl and Murrell, 2025).

Discussion and relevance

This essay is intended to contribute to the recent literature emphasising the need to unbundle the general concept of institutions. We started with the now classic distinction by Davis and North (1971) between the macro-layer (the 'institutional environment') and the micro-layer ('the institutional arrangements') to argue that this dichotomy misses the transmission mechanisms linking these interacting layers. To fill this gap, we introduced a third layer, encompassing the set of 'meso-institutions'. The resulting tri-partite framework converges in many aspects with similar efforts by North (1990), Ostrom (2005a, 2014), Ménard (2014), Jacobi (2014, 2018), etc. We went a step further, submitting the need to pair institutional layers with auxiliary theories to reduce complexity and ambiguities. We substantiated this approach through the case of the auxiliary theory of meso-institutions characterised by three functions, permitting the adaptation of a substantive theory to the analysis of specific objects.

The resulting model has no pretension whatsoever to provide a final answer to the issue of how to assess institutions and their impact on economies, their actors, and their performance. More modestly, in accordance with Merton (1968) and Ostrom (2005a; 2014), it intends to show ways to deal more adequately with the complexity of institutional settings through a decomposition strategy identifying specific components, and to circumvent the ambiguities plaguing too many general concepts of 'institutions'. Numerous articles, some from this symposium, illustrate the relevance of this framework.

[14]For extensive discussions by contributors using alternative methodologies to assess institutions, see Ménard & Shirley (2018; 2025, particularly section VIII).

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However, this model faces challenges that are recurrent in social sciences. Three of them deserve special attention.

The definitional issue

Humphrey Dumpty stated: 'When I use a word, it means just what I choose it to mean — neither more nor less'. (Lewis Carroll, 1871). Although it sounds extreme, this position points out the contextual nature of definitions. When analysing institutions, definitions rely on underlying assumptions and the object of investigations they intend to delineate. For instance, the definition of institutions in game theory connects to assumptions regarding individual behaviour and the behavioural conditions needed for individuals to reach an equilibrium through rules that frame their actions.

This essay adopted a new institutional perspective, with institutions designating devices and mechanisms through which rules, norms, and beliefs are established by, passed to, and interact with actors who face challenging states of nature. In his exchanges with North, Hodgson (2006) argued that new institutionalists stick to an excessive focus on formal rules, leading to a narrow conception of institutions.[15] He also criticised North (1990) for substituting the concept of 'organizations' to 'institutional arrangements', at risk of ignoring the institutional dimension of all organisations. In continuity with the 'original' institutionalism, he emphasised the need for a concept of institutions general enough to integrate all dimensions of human activities. However, in doing so, Hodgson maintains the discussion at the broad level of the substantive theory, without providing clear insights on how to analyse specific institutional settings. Our model can be viewed as a way to circumvent this limitation: decomposing the substantive concept of institutions into institutional layers to which auxiliary theories are associated opens the way to the identification of more specific and less complex objects (e.g. micro-institutions and the variety of organisations), making room for hypothetical constructs that support rigorous empirical investigations (e.g. the implementation of property rights in public-private partnerships).

Differentiating institutional layers and related auxiliary theories highlights the importance of specific theories to make institutional analysis operational (Buchanan et al., 2014: 2; Goertz, 2020: 27 sq.). However, this conceptual construction does not eradicate the risk of arbitrariness in definitions. Notwithstanding the motivation provided, the suggested framework can be challenged (e.g. why only three layers? Why not stick to the distinction among geographical layers – such as international, national, regional, local levels, as in Jacobi, 2014 or OECD, 2015?). The merit of our approach comes from going beyond description by characterising institutions and their layers with specific concepts, opening room for rigorous discussions and well-controlled empirical investigations. Ultimately, its relevance relies on its confirmation, revision, or even rejection through the empirical investigations it permits.

Interdependence or Causality?

Our analytical framework also emphasised the interdependence of the different institutional layers while deliberately intending to avoid the controversial issue of causality.[16] Heckman (2005) proposed to understand 'causal investigation' as gathering data to estimate the effect of explanatory variables on the dependent variable. Considering the specificity of assets as the determinant of the trade-off between 'make' or 'buy' (Williamson, 1985, chap. 4) raises this issue of causality at the micro-level of institutional analysis (Soregaroli et al., 2022). Symmetrically, in a penetrating examination of the 'deep determinants' at the macro level of growth and development, Maseland (2025) argues that the emphasis on causal inference led to neglect questions about the validity and interpretation of data.

[15]Recent NIE contributions pay increasing attention to informal rules and norms (Ménard & Shirley 2025).

[16]On the issue of causality in natural sciences, see Frisch (2023).

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In our model, the role attributed to meso-institutions as transmission mechanisms captured through 'auxiliary' or 'middle range theories' (Kaidesoja, 2019) circumvents this controversy by moving the analysis away from the focus on 'institutions as cause' to 'institutions as the outcome' of interactions among agents in search of coordination to face challenges from states of nature. We showed how the functions characterising meso-institutions frame these interactions. Dries and Splinter (2025) lively illustrate this approach through the case of the implementation of biodiversity policies in the Netherlands.

The status of quantitative analyses

Following a well-established epistemological tradition, this essay endorsed the view that to orient empirical investigations and guide the interpretation of their results, hypothetical constructs need to be rooted in and derived from auxiliary theories and, ultimately, from their underlying substantive theory, (see already Canguilhem, 1968/2019: 251 sq.; also 1994; and Lakatos, 1976). Although we unambiguously consider data gathering as essential to substantiate and enrich hypothetical constructs, challenge them, and even initiate radical revision, we assumed that empirical investigations need to be guided by theoretically based questions.

However, this leaves open the theoretical and methodological status of data gathering. Numerous recent contributions promote alternative and often opposite views on this issue. For instance, Voigt (2013; 2018b), following Eisenhardt (1989), considers the possibility of developing a structured knowledge through extensive empirical investigations, so that theoretical questions would emerge from data. Recent developments in AI tend to go in the same direction (Grajzl and Murrell, 2025; Prüfer and Prüfer, 2018). Al-Ubaydli et al. (2025) and List (2025) take a very different stance, raising the question of whether institutional analysis will ever be able to reach the status of science, considering the difficulty of building theoretically motivated empirical tests (e.g. field experiments) to assess the nature and role of institutions in explaining economic performance. Skarbek (2020) promotes a nuanced position, acknowledging the importance of quantitatively oriented investigations while emphasising all we can learn on the complexity of institutional settings through qualitative approaches.

In-depth discussion of these issues by far exceed the scope of this essay. What we want to point out is how the core of our research strategy, which underlies our analysis of functions and tasks leading to variables allowing to capture how institutions actually operate, leaves room for alternative methodologies depending on the questions at stake. Differentiating institutional layers involves building different auxiliary theories that raise specific questions related to different objects of analysis and that command different methodologies, including 'narrative' arguments and 'mixed methods' (Al-Ubaydli et al., 2025 *section 3.3*). For instance, exploring the interactions between social norms or culture and growth (Mokyr, 2016, 2025) likely requires a different methodology than the one relevant for the Williamsonian approach to organisations.

Conclusion

This essay introduced a model unbundling 'institutions' through the identification of its institutional layers. It paid special attention to the long-ignored role of 'meso-institutions' in bridging the gap between the macro-layer at which constitutive rules and norms are established and the micro-layer defining the playing field within which actors operate. This emphasis on meso-institutions is intended to show the theoretical as well as empirical gains expected from moving from a substantive theory to auxiliary theories that better connect to more specific facets of institutional settings. We argued that this unbundling strategy allows the development of better-framed and more robust empirical investigations. Indeed, auxiliary theories provide foundations to hypothetical constructs supporting the empirical assessments of the different functions and tasks expected to be fulfilled by different types of institutions operating within different institutional layers.

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This approach has deep roots in contributions of the last decades on institutions and their role in the economy, many of which are referenced in this essay. It also benefited from the literature in social sciences as well as the epistemology of natural sciences that makes more explicit the investigation procedures at work in different research agendas. Reviewing this rich and diversified set of contributions by far exceeds the scope of this essay. More limitedly, we took some of them as a starting point for a revision of the prevailing views on institutional analysis; and some others as a 'springboard' to clarify methodological issues at stake in the implementation of our theoretical model, thus opening room to more rigorous empirical investigations and, ultimately, to measurement.

A significant number of publications already go in this direction. The rich contributions to this symposium provide more insights into this 'progressive research agenda' (Lakatos, 1976).

Acknowledgements. This essay benefited from comments by participants to conferences in Montpellier (CIRAD), Stockholm (SIOE), Garda Lake (EAAE), Paris (CES), Thessaloniki (PIRATES), Rennes (EAAE), and Catania (WINIR). Special thanks for inspiring comments to Alessandro Banterle, Liesbeth Dries, Jan Falkowski, Jonathan Greenacre, Nadia von Jacobi, Kostas Karantininis, Camille Limoges, Stefano Pascucci, Annie Royer, Claudio Soregaroli, and Stefanella Stranieri. We also greatly benefited from the excellent comments by five reviewers on successive drafts.

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Cite this article: Ménard C and Martino G (2025). Unbundling institutions: the case for meso-institutions. *Journal of Institutional Economics* **21**, e31, 1–20. https://doi.org/10.1017/S1744137425100192