Networks and the Rule of Law: A System View on Values and Institutions

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Abstract

Citizens exert networked coordinated action for a variety of reasons, among which economic and political ones. We construct on the O-group versus P-group hypothesis (Knack, 2003; Knack and Keefer, 1997) and investigate the relationship between networks and the rule of law. Distributional coalitions à la Olson (1982) pursue (small) group interests which often go to the detriment of a larger group and the public good. P-groups are in line with Putnam's (1993a) civic associations that promote social capital. While O-groups can be expected to undermine the rule of law, P-groups can promote it asking for greater transparency and accountability of the governing bodies. We put the relationship between networks and the rule of law into a system or relations in which values, social norms and formal institutions mediate and forward causal pathways. We organize a comprehensive interdisciplinary literature review along each single link, and reconstruct the current state-of-the-art regarding the functioning of the system we conceptualize.

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1 Introduction

Why is the rule of law under attack in so many places around the world? Why has it been maintained and defended in some contexts, while others have witnessed significant backsliding? Given current global scenarios, these are pressing and urgent questions that demand in-depth analysis. No single, easy answer exists, as societies differ greatly in their claims, interests, political preferences, and capabilities in defending the rule of law. Numerous factors concur in explaining these dynamics and contribute to divergent trajectories.

In this paper, we adopt an interdisciplinary perspective that aims to uncover complex societal mechanisms that either foster the establishment and strengthening of the rule of law, or, conversely, undermine it. We focus on the central role that networks play in affecting the rule of law and in shaping how rights, resources, benefits, and obligations are distributed among members of society. Economic literature has mostly looked at this through a collective action problem-perspective[1], seeking to analyze which shared goals bring different individuals together in a group. Political science approaches look at the role of citizens and networks in relation to formal and informal institutions and address how power imbalances emerge and operate. Network science adds a different layer by examining how networked interaction can be deciphered through the patterns and configurations networks assume. We purposefully combine different disciplinary perspectives to shed light on social dynamics, institutional change, and citizen behavior.

We focus on a key question, namely, how do networks relate to rule of law? We conceptualize this relationship as bidirectional – networks can affect the establishment and functioning of the rule of law. And the quality and stability of the rule of law, in turn, significantly contribute to the emergence and resilience of different kinds of networks. This relationship is deemed to be important to understanding differences in socio-economic outcomes across societies, such as levels of material and immaterial wealth, inequality, and well-being. In addition to the two key objects of our investigation, we explicitly examine the role of informal institutions. They influence citizens' expectations, legitimize rulemaking and enforcement, and shape the willingness of individuals and groups to resist abuses of power by public authorities.

We develop a conceptual framework that is presented as a 'system' of interrelated elements or 'nodes', namely (i) 'networks', (ii) 'rule of law', (iii) 'informal institu-

[1] A key reference for this type of investigation is Mançur Olson's (1965) book *'The logic of collective action'*.

tions', and (iv) 'socio-economic outcomes'. Section 2 is dedicated to a synthetic representation of such conceptual system and to our key hypotheses. The system approach we adopt seeks to capture the complexity of mutually reinforcing bidirectional causal relationships. We expect this conceptual framework to shed light on the mechanics through which the rule of law is either reinforced or undermined in different societies.

In reviewing the relevant literature, we structure the material we study along the different elements of the conceptual system. First, we describe key concepts and propose our working definitions for them (Section 3). Next, we examine every possible linkage between any two of such key concepts separately (Section 4). A final discussion (Section 5) resumes which gaps the interdisciplinary literature we examined leaves open.

2 Conceptual System & Hypotheses

Citizens exert networked coordinated action for a variety of reasons, and we follow other authors (Beugelsdijk et al., 2004; Coates and Heckelman, 2003; Degli Antoni and Grimalda, 2016; Knack, 2003; Knack and Keefer, 1997) to classify such kind of coordination as resulting in either O-groups in line with Olson's (1982) description of distributional coalitions that pursue (small) group interests, even if these are to the detriment of a larger group, or – alternatively – in P-groups in line with Putnam's (1993) civic associations that promote social capital and horizontal organizational styles.

Networked coordination within society could be either detrimental or constructive for the rule of law in a specific moment in time. O-groups promote group interests in which acquiring a greater 'slice of the pie' for one's group goes to the detriment of the public good – or the overall size of the pie (Olson, 1982). The process implies some sort of collusion with decision-makers which goes to the detriment of the rule of law. P-groups that may not explicitly pursue the promotion of the rule of law, tend however to pursue other types of public goods and universal values that reduce the risk of collusion. To the extent that P-groups truly pursue their interest without colluding, they are an instance of democracy and promote rule of law through the dialogue and monitoring of decision-makers' activities (Weingast, 1997). When P-groups mobilize time, energy, resources and motivation for horizontally organized activities in which responsibility is shared (von Jacobi et al., 2024), empowerment takes place (Follett, 1924), social capital is enlarged,

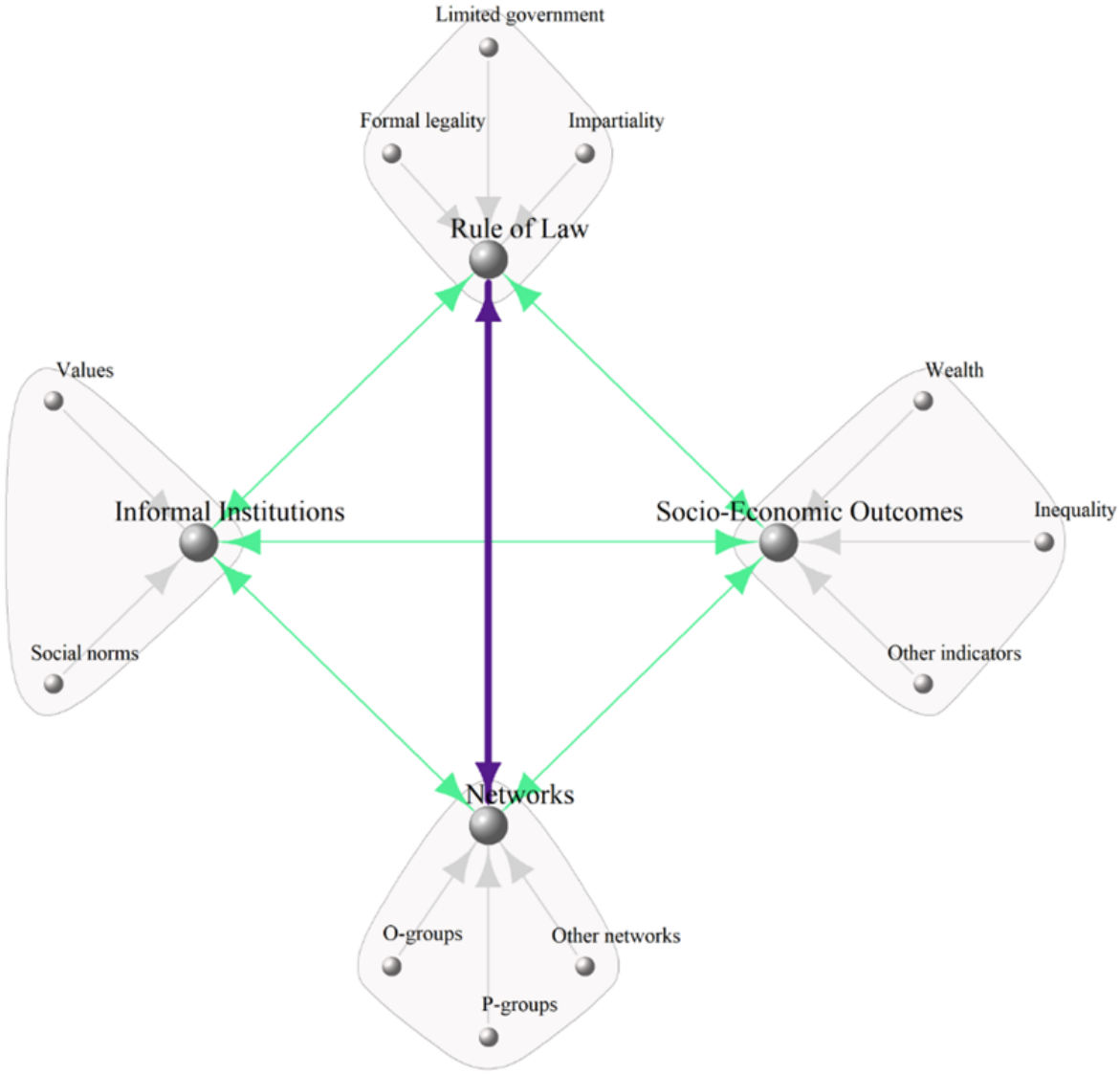
and essential aspects of the rule of law are therefore promoted. As the rule of law is a public good, P-groups are therefore interpreted as networks that can at least potentially enlarge the 'size of the pie' (in Olsonian language).

Empowering networks may exert a positive impact on the rule of law by asking for greater transparency and accountability of the governing bodies. Positive networks potentially create public benefit. Rent-seeking networks, that may be subject to internal competition or collude in order to set those standards that constitute a socio-political order in their favour (North et al., 2009), are instead expected to exert negative influence on the rule of law in as much as public benefit is redirected and appropriated by a minority in society. While this simplified representation of networked society has already gathered some traction in the literature, it remains vague whether the expected (positive and negative) impacts manifest and through which mechanisms and tipping points.

Figure 1 summarizes our conceptual system. We adopt a perspective in which multiple relationships tie the key elements of our investigation together. We are particularly interested in the bidirectional link between networks (the formation of O- and P-groups) and the promotion/undermining of the rule of law. However, by adopting a systemic view, we envisage secondary causal paths, mediations and feedback effects with informal institutions and with socio-economic outcomes.

We expect informal institutions to matter with respect to which individuals are more easily 'part' of a network. These can on the one hand be conducive to the rule of law, when they e.g. promote moral universalism, or undermine it, when they imply discrimination of certain groups in society or favour corruption and clientelism. The rule of law can, reversely, also reduce the relevance of informal institutions – for example when it helps break the "cage of norms" by making people equal in front of the law and less caged by traditional, informally held, discriminatory practices (Acemoglu and Robinson, 2019; Narayan and Pritchett, 1999).

FIGURE 1: Conceptual system for studying networks and the rule of law.



Source: Elaboration by the authors.

The the rule of law can be expected to have a (direct) impact on socio-economic outcomes, as granting the rule of law comes along with higher institutional quality and more widespread access to justice. Formal institutions can contribute to 'levelling the playing field' not only in form but also in substance, when they e.g. consolidate and structure access to education and to health through public services. By granting equality in front of the law they also break discrimination patterns that would otherwise systematically reproduce socio-economic inequalities (of specific ethnicities, of women, of religious minorities, etc..). The rule of law in this way contributes to increasing trust and trustworthiness (Cassar et al., 2014).

Yet, formal institutions do not emerge in a vacuum, nor are they sufficient as much of de jure legislation does not automatically translate into a de facto implementation of its core intentions. Formal regulation is doomed to resemble incomplete contracts (Williamson, 1985) – impossibly foreseeing any possible instance of real-life applications or of combinations and concatenations of events. Furthermore, formal legislation often 'institutionalizes' bottom-up requests for the guarantee of specific values, so formal orderings are constantly in intentional or unintentional 'dialogue' with informal or private orderings (Williamson, 1985). We can understand informal orderings (here: informal institutions) to be all those values and norms not enforced by the state but by society itself (Voigt, 2018). To the extent that formal institutions are synergetic with informal institutions, they both push society into the same direction and reinforce each other. However, historical and political breaks can create divergence between formal and informal institutions – for example when power is detained by a minority and formal institutional arrangements are extractive (Robinson and Acemoglu, 2012). Understanding socio-economic effects therefore requires a delicate calibration between the synergetic and diverging pressures for inclusion vs. extraction that populate formal and informal institutions.

Formal institutions will for example influence which network formations are legitimate (Beckert, 2010), also mediating formation patterns emerging from historically held values. By institutionalizing certain 'inclusive' versus 'extractive' patterns, formal institutions are likely to slowly produce network rankings in which certain networks fare better than others due to privileged access to strategic resources. Such feedback effect that can be slow – or cumulative but also sudden and radical – affect both, networks' hysteresis and change (Gunderson and Holling, 2002).

In line with our conceptual system depicted in Figure 1, we adopt a perspective in which multiple relationships tie the key elements of our investigation together. In what follows, we review the existing literature based on the structure of this systematic representation. Section 3 focuses on definitions of the key concepts — represented as nodes in Figure 1 — while Section 4 examines their linkages – depicted as arrows between the nodes.

3 Nodes: Definitions and Components

3.1 Rule of Law

Broadly speaking, the rule of law refers to a set of principles and procedures that regulate the interactions between the state and its citizens.[2] At its core, rule of law means equality before the law, which rests on three main pillars: (i) formal legality, (ii) limited government, and (iii) impartial (*de facto*) exercise of public powers.

Equality before the law involves formal legality, meaning that laws comply with specific formal criteria, like those articulated by Fuller (1969). According to these, laws should be general, publicly promulgated, prospective, clear and consistent, predictable, stable over time, and congruent with how they are applied.

Equality before the law also includes limited government. This means that the exercise of public powers is bound by a well-defined set of rules and not subject to the arbitrary will of rulers (Hayek, 1944).

Finally, equality before the law requires an impartial application of the law, meaning that laws have to be crafted and enforced impersonally, that is, in a manner that does not benefit particular groups at the expense of others in objectively similar situations. Public officials and government entities should therefore exercise their powers neutrally, without favoritism or bias, ensuring that like cases are treated alike.

In addition to structuring state-citizen interactions, the rule of law also regulates interactions among citizens. It protects individual rights and freedoms, discourages discrimination and abuses in private relations, and provides a legal framework that enhances predictability in interpersonal interactions through the equal application of the law.

3.2 Networks

Networks, defined by a set of nodes and a set of links between them, describe interacting systems (Barabási, 2016; Newman, 2010). Social networks put individuals as key unit of their nodes, whereas system networks represent links between con-

[2] We here refer to "citizen" in an extended manner, avoiding a strictly territorialized and formal understanding of citizenship, and instead resorting to all people who are subjects to a specific type of public power.

cepts, products, organizations or any other object of interest. Relationships among persons in social networks can be evident or hidden. One of the mechanisms of link formation in social networks is homophily, i.e., the tendency of people to get attracted to others with similar features (McPherson et al., 2001). Certain shared characteristics that shape individual identity can become the explicit basis for network formation (Putnam, 2000). Examples include associations organized around religion, race, gender, or sexual orientation. In this case, identity-based networks form, which are typically characterized by members offering high levels of mutual support and solidarity. Another sub-category of networks are groups. While all groups are networks, not all networks are necessarily groups. Groups display greater density in interactions, typically implying that (almost) everybody knows everyone else being part of it.

Within networks, a key difference lies in the type of links that form between the persons involved: where 'bonding' social ties tend to link individuals with similar characteristics (possibly also belonging to the same group), 'bridging' ties can bring people together that are rather dissimilar (e.g., persons with different socio-economic background, educational levels, ethnic belonging, etc., possibly even belonging to different groups).[3]

In what follows, we are particularly interested in social networks that engage in some kind of collective action to achieve a shared goal (Olson, 1965). We represent these networks as groups of social actors that cooperate to pursue shared interests in socio-economic domains, which would not be attainable by the actors individually. We draw on the distinction made by Knack and Keefer (1997) and Knack (2003) between Olsonian and Putnamian groups (henceforth, O-groups and P-groups, respectively).

An O-group refers to a network formed primarily around the pursuit of narrow group interests, which include the acquisition of some kind of rent, and which is potentially detrimental to the broader public interest. In terms of topology, small Olsonian groups (Olson, 1982) or family clans (Viry and Herz, 2021) are examples of dense networks, which can be complete. O-groups recall Olson's distributional coalitions (see below) whose goal is to appropriate the possibly largest "slice of the pie", where the pie represents societal resources, and the slice stands for the rents obtained by members of the group (Olson, 1982). O-groups, therefore, have by definition extractive intentions with respect to societal resources or government goods (Mizuno et al., 2017) such as rule of law.

[3]For a comprehensive overview on bonding and bridging social capital, please refer to https://www.socialcapitalresearch.com/difference-bonding-bridging-social-capital/.

In contrast, a P-group denotes a social network grounded in mutual trust and shared norms of reciprocity, generating social capital and potentially contributing to the broader public interest. P-groups (see below) do not prevalently have extractive intentions and may even increase resources of society or favor a more equal distribution. P-groups can be dense or sparse, depending on the nature of the links they are based on bonding interactions lead to closed, dense networks, while bridging links make the networks more open and heterogeneous in terms of actors involved.

Both O- and P-groups operate as cooperative structures and can engage in activities like information exchange, lobbying, coalition-building, and logrolling (Choi and Storr, 2019). Yet, we bring forward the hypothesis that they can differ fundamentally in their prevalent intentions, network topology, and value orientation. While O-groups mainly seek to extract rents (Choi and Storr, 2019; Tullock, 1967), prevalently engage in bonding ties, and often act as potent drivers of institutional erosion, P-groups generally pursue interests that have positive spill-over effects beyond their members, engage in bridging ties and defend universalist values.

3.2.1 Olsonian Groups

The idea of O-group originates from Mançur Olson's foundational works, *The logic of collective action* (Olson, 1965) and, in particular, *The rise and decline of nations* (Olson, 1982). O-groups, such as professional associations or trade organizations, act as 'distributional coalitions', lobbying for policies that benefit their members while imposing disproportionate costs on society at large, such as tariffs, tax breaks, subsidies, or competition-inhibiting regulation. In other words, they are networks that advocate for their own advantage at the expense of social welfare.

Due to collective action problems, including the risk of free-riding, cooperation within O-groups may remain suboptimal, even when pursuing shared interests. For this reason, cooperation in O-groups is fostered through selective incentives: individual-level formal or informal inducements, either rewards or penalties, which motivate participation in collective action, particularly in relatively large groups where the temptation to free ride is high. For instance, a trade union may negotiate a better contract that benefits all workers, but only dues-paying members receive legal assistance or other exclusive services. These "member-only" services function as selective incentives.

Although O-groups do not engage in purely voluntary cooperation for the achieve-

ment of shared interests — indeed, they need selective incentives to do so — they succeed because the costs of their collective actions, though socially significant, are widely dispersed among the wider public, making resistance and opposition unlikely or weak. For example, while a specific tax exemption might severely distort fiscal policy, its individual cost to each taxpayer is minimal, thereby reducing incentives to mobilize against it. Hence, Olson contends that large and diffuse groups — like consumers or taxpayers — tend to be ineffective at organizing due to collective action problems, whereas smaller and more cohesive groups can more easily overcome the costs of collective actions.

Consequently, O-groups tend to consolidate power over time with minimal resistance from broader society, ultimately undermining economic performance. More broadly, O-groups are typically formed to secure group-specific benefits for their members — such as subsidies, regulatory advantages, or preferential access to resources — and operate in ways that distort market competition, reinforce rent-seeking behavior, and weaken institutional efficiency. By leveraging their influence, they are able to extract rents and shape public policy in ways that compromise institutional integrity and fairness (Olson, 1982).

Scholars have further shown how networks of political and business elites can co-opt and gradually take over legal and regulatory institutions, eroding rule of law through selective enforcement, manipulation of legal processes, and clientelism (Fazekas et al., 2023; Ganev, 2001; Hellman et al., 2000; North et al., 2009). Among others, evidence of such practices is illustrated in what Acemoglu et al. (2001) and Robinson and Acemoglu (2012) have described as "extractive institutions",[4] as well as in the extractive equilibria observed in post-communist countries (Ganev, 2005; Dimitrova, 2018).

3.2.2 Putnamian Groups

P-groups studied by political scientist Robert D. Putnam, particularly in *Making Democracy Work* (Putnam, 1993a) and *Bowling Alone* (Putnam, 2000) — e.g., those involved in youth work and cultural activities — are characterized by an inclusive and horizontal structure and are typically oriented toward more universalistic goals. Putnam (1993a,b, 2000) studied civic networks and how they con-

[4]Extractive institutions is a term coined by Acemoglu (2003:1235) to indicate institutions that "concentrate power in the hands of a small elite and create a high risk of expropriation for the majority of the population". Expropriation is to be understood not only in concrete terms of violating property rights but also in a broader way in which benefits that are potentially shareable among the entire population are appropriated by the minority only – at the costs of the majority.

tribute positively to institutional performance and democratic governance, while they also generate social capital.

P-groups sustain voluntary cooperation and mitigate collective action problems not mainly through selective incentives, as in O-groups, but commonly through shared civic norms that foster trust, social capital, and accountability. When citizens trust one another, they are more likely to believe that the law will be applied fairly and impartially. Moreover, P-groups promote norms of reciprocity, encouraging individuals to treat others with respect and fairness — values that often extend into the legal realm, where citizens become more inclined to comply with laws and cooperate with law enforcement. Civic engagement within P-groups also provides individuals with opportunities to learn about their rights and responsibilities, develop civic skills, and sometimes interact with government officials. As a result, when citizens are engaged in the public arena, they are more likely to speak out against corruption and hold officials accountable for violating the law. These benefits are especially pronounced in decentralized networks that empower citizens to monitor decision-makers, resist abuses of power, and collectively uphold norms of legality and fairness (Weingast, 1997; Chetty et al., 2022a).

3.3 Informal Institutions

Informal institutions represent systems of socially embedded rules and norms within groups that do not rely on the state as the enforcer of last resort. They comprise unwritten behavioral patterns that are commonly known and shared. In line with this view, Williamson and Kerekes (2011:546) state that "informal institutions are those rules that shape human behavior but are outside of government and are not part of a written legal framework". Their definition aligns with North (1991), who holds that informal institutions — understood as informal rules — are, by definition, non-legal in character (cf. also Hodgson, 2025). Informal institutions encompass a wide range of phenomena, including language, etiquette, customs, rituals and table manners (Hodgson, 2025) as well as taboos, customs, traditions, conventions, codes of conduct, and norms of behavior (North, 1991).

The enforcement of informal institutions may be automatic when there is self-enforcement like in the case of conventions (e.g., sticking to grammatical rules of one's language, see Voigt, 2018). In such situations, all agents are interested in sticking to the rule to avoid self-damage. In many other cases, however, enforcement mechanisms are in place that rely on pressure among peers or "valued others" (Creed et al., 2014; Hodgson, 2001; von Jacobi and Nicholls, 2024; Stets and Burke, 2000).

Within our conceptual system, informal institutions are interpreted as a relatively broad concept which comprises two types of scenarios, namely one in which rules and norms refer to specific situations, and one in which rules and norms provide general guidance over which behavior to prefer across many different situations (Schwartz, 2007). While rule of law has a tightly legal nature that also necessitates the enforcement by the state, values and social norms do not have such legal nature, and they are typically enforced by society, or by peers belonging to a subgroup within it, without relying on the state.

Culture and institutions have been treated as distinct concepts (Alesina and Giuliano, 2015; Hodgson, 2001), the former including traits that may be present in several institutions while not being synonymous with them (Hodgson, 2001:298-300). While some authors have further pushed to distinguish culture from informal institutions despite recognizing important overlaps between the two (Amendolagine and von Jacobi, 2023; Graafland, 2020; Pitlik and Rode, 2017), we explicitly flag that informal institutions are here not considered separate from culture (Pejovich, 1999). The main reason for this choice is to emphasize a different distinction, namely one between the overlapping realms of culture and informal institutions – and in particular their non-legal nature – from the more formal realm and the more legal nature of rule of law.[5] In what follows, the term "informal institutions" therefore comprises culture, cognitive frames — or the ways in which individuals filter reality (Beckert, 2010) — but also values, beliefs and social norms.

Within social psychology, culture cumulatively builds on collective experiences of meaningful situations that affect common knowledge, cognitive schemata, and, possibly, goals (Oyserman, 2017). Informal institutions structure social interactions and contribute to making the behavior of others more predictable (Basu, 2018; March and Olsen, 1983; North et al., 2009). Informal institutions crucially rely on (social) expectations. Therefore, any defection/conformity may not necessarily be directly enforced but may also be indirectly triggered through social copying mechanisms (e.g., herding), which reflect the desire to align with a certain part of society or, in other words, to align with others belonging to a certain network.

Informal institutions, as we treat them here, are also, to some extent, cognitive means to avoid systematic processing, as they imply rapid responses without conscious deliberation within the human brain (Wilson et al., 1993) and therefore rely

[5]Broadly speaking, we see rule of law as mainly belonging to the realm of formal institutions. However, not all formal institutions necessarily work in favor of rule of law, as demonstrated in the sections dedicated to the different branches of government. Furthermore, some formal institutions may be constitutive of democracy, but not automatically of rule of law.

on reflexive cognitive processes (Bénabou and Tirole, 2016; Tversky and Kahneman, 1983). They also help reducing transaction costs.

3.3.1 Values

Values are key components of informal institutions. They "directly define what is desirable and create taken-for-granted perceptions of what is "natural" in social relations" (Licht et al., 2007:661). At the individual level, values serve as guiding principles shaping perceptions, judgments, and behaviors across contexts (Schwartz, 2007). At the societal level, they shape collective preferences and expectations and thereby provide normative frameworks for institutions and governance (Licht et al., 2007).

Parsons et al. (1951:171) articulated culture as 'normative pattern of value orientations' that assist individuals in their decision-making and in their ability to adapt to new circumstances. Value-orientations may be logically consistent amongst each other, or not (Acemoglu and Robinson, 2021:25 referring to Clifford Geertz). Values can be activated and combined selectively to provide meaning to social interactions.

Such flexibility in the combination of (shared) values to create meaning makes culture, which is typically understood as transmitting elements from generation to generation (Guiso et al., 2006) not automatically fully persistent over time but also subject to adaptation and change. Acemoglu and Robinson (2025) argue that cultural configurations – which combine a set of different attributes such as values and norms – may change within the same society, in time: while cultural sets may be more persistent, implying that the kind of attributes (e.g., values) being relevant may be more or less stable, their relationship and combination — leading to an emerging cultural configuration — may change through time.

The way in which values are combined is therefore a fluid ability of society to provide old and new justifications and solutions that help individuals coordinate their behavior within meaningful social interactions. The role of well-delineated networks becomes crucial in the search for meaningful interactions. Indeed, networks embracing so-called sub-cultures may promote and transmit quite different values and norms even within a society promoting a different set of values and norms. This leads to a situation in which, in any moment in time, different sets of values may be held and promoted by different networks and — dynamically — some sets of values may become more 'mainstreamed' than others.

3.3.2 Social Norms

We here conceive of social norms as informal institutions that are shaping standards of acceptable behavior for the members of a given community (Finnemore and Sikkink, 1998), thereby inducing convergence on collectively shared behaviors.

Definitions of social norms vary among disciplines, however at least two elements recur in many definitions: i) a shared view of what people do and ought to do in a certain situation; ii) the presence of an informal enforcement mechanism based on peer sanctioning. Both elements require a certain reference group[6] within which views, expectations and potential sanctioning mechanisms are shared.

According to Bicchieri (2005), for example, the behavior of an individual can be explained in terms of conformity to a social norms if (i) the individual prefers to behave in that way because she believes that most people in her reference network do it – she holds empirical expectations, and (ii) she believes that most people in her reference network believe that she should behave in that way and may be ready to sanction her if she doesn't do it – she also holds normative expectations.

A working definition of social norms could be the following: "a behavioural regularity; that is based on a socially shared belief of how one ought to behave; which triggers the enforcement of the prescribed behaviour by informal social sanctions." (Fehr and Gächter, 2000:166).

It is therefore clear that conformity with social norms depends on a clear definition of the reference group (Bicchieri, 2005, 2016) and their perceived salience in a specific context (Cialdini et al., 1990). In this respect, social norms can vary in their degree of generality —from norms that apply to society as a whole, to norms perceived as rules governing the behavior of a restricted group (e.g., a profession, subculture, or community) or individuals in a specific situation.

The second necessary condition for norm conformity is effective enforcement. Since enforcement typically comes from peers, it presents challenges. The decision to sanction defectors often entails significant psychological costs, leading to the problem of second-order free riding and the delegation of punishment (Panchanathan and Boyd, 2004; Yamagishi, 1986). Punishing free riders can also provoke conflict and even counter-punishment (Denant-Boemont et al., 2007). However, significant cultural differences exist (Garfield et al., 2023) and are an interesting avenue to explore when considering the effects of norms and other informal institutions on rule of law.

[6] A reference group is any group that individuals compare to and use as a standard to evaluate their own behaviours and attitudes (Hyman, 1942).

While some emphasize the 'bright side' of social norms — highlighting their role in fostering prosocial behavior, cooperation, redistribution, honesty, and coordination (Bicchieri and Xiao, 2009; Charness et al., 2025; Fehr and Fischbacher, 2004; Krupka and Weber, 2013; Gneezy, 2005; Ostrom, 2000; Sugden, 1998) — others draw attention also their "dark side". These include their potential to perpetuate bad traditions (Taylor et al., 2019), discrimination (Acemoglu and Robinson, 2019) and prejudice (Allport, 1954; Álvarez-Benjumea, 2024) or corruption (Kubbe et al., 2024).

3.4 Socio-Economic Outcomes

Socio-economic outcomes (hereinafter SEOs) are here intended to be all sort of manifestations of societal well-being and of structural achievements that may potentially result from a sound evolution and working of rule of law. We refrain from limiting our perspective to material well-being that would require concentrating on income and GDP levels and growth but instead propose a series of selected indicators that capture various aspects of societal thriving, including immaterial dimensions. While some of these indicators may be derived from individual microdata, the unit of analysis is likely to be aggregated at least at the group/lower administrative if not at the country level.

Examples of socio-economic outcomes are material wealth (GDP per capita), immaterial wealth such as health and education (Human Development Index subpillars, in line with Amartya Sen's Capability Approach), planetary pressures-adjusted HDI, poverty (both material and immaterial based on some absolute or relative poverty line), income inequality (Gini Index), immaterial inequality (Gender inequality Index, Gender Development Index; Gender Social Norms Index) including horizontal inequality across specific groups; access to justice, access to education, access to health services (Inequality-adjusted Human Development Index), environmental segregation, productivity in firms (TFP), or profitability of firms, Foreign Direct Investment (FDI), innovation – e.g., number of patents, size of the public sector/size of government, political/affective polarization, trust in institutions and in the government, quality of life and happiness of citizens.

4 Linkages

4.1 Rule of Law – Networks

4.1.1 From Networks to Rule of Law

The linkage between rule of law and networks plays an extensive role within the literature that has investigated the evolution of institutions and their quality. The prevalent logic underpinning networks in this case is one in which *kinship ties*, meaning networks that are based either on ascriptive membership like blood lineage or on ethnic belonging — thus resembling identity-based networks — are distinguished from *impersonal exchanges*, meaning interactions that do not necessarily imply close relationships between the transacting parties – no matter whether such interactions are repeated or not (Enke, 2019; North, 2010; Schulz et al., 2019).

Societies in which networks tend to form around ascriptive identity — like clans — tend to consolidate institutional landscapes in which the prevalent norms are of informal type (Alesina and Giuliano, 2015; Enke, 2019; Mokyr and Tabellini, 2024). The key reason is that networks are personal, which means that informal enforcement working through fear of loss of reputation and ostracism is particularly strong and functional because the reference group is closed, relatively small, and tight. In such societies, informal institutions that typically come with some kind of "cage of norms" (Acemoglu and Robinson, 2019) predominate. The cage of norms refers to all sort of consolidated discriminatory behaviors, e.g., against women, against youngsters, against other ethnicities, etc., which serve to maintain a given social order within an identity-based network. An example is patriarchy.

In societies in which impersonal exchange has evolved, the institutional outcome can be different. North (2010) describes the evolution of impersonal exchange as being the typical result of either migration or the increase in population that leads to the encounter of different networks that were previously relying on identity ties. The encounter between different networks opens a window of opportunity for exchange *across* them, but this historically has first occurred within a regulatory vacuum, as – with the lack of a shared reference group – there had been no typical enforcement mechanism in place yet.

In such a situation, either one network will impose its own rules on the other, or new solutions for the regulation of impersonal exchange need to develop. Such solutions are the root of both rule of law and institutional development, as they

need to unhook from an identity-based informal enforcement mechanism and replace it with (more formal) third-party enforcement. This is the standard solution that human societies have developed: where third-party enforcement is in place, the idea of a third, neutral party that judges and decides upon the case gains space.

From the moment in which the regulatory vacuum between networks is attributed to external enforcement — external to the respective kinship networks — and formal rules develop, such development also reduces the grip of the "cage of norms".

It is important to note that such change occurs through a mediating effect of informal institutions: third-party enforcement requires and facilitates the co-evolution of universal moral values (Enke, 2019). As such values slowly replace more local and discriminatory informal rules, a fertile ground for the development and consolidation of rule of law is provided. The mechanism described is not completely universal. Acemoglu and Robinson (2019) describe the society of the *Tiv* as an instance of a group that consciously chooses not to delegate decisions to any overarching body. Their resistance to creating overarching hierarchies is, however, seen as an important obstacle to socio-economic development.

Beyond the resume of the key literature on this linkage, it is important to note that not all O-groups (nor P-groups) are necessarily identity-based networks, see Table **??**). Many contemporary cases of state capture discussed above – and below – are often the work of personalized patronage networks that may not share identity but still share personal ties that rely on informal institutions.

Theoretically, different networks can either push a social demand for rule of law or for its erosion, depending on their cost-benefit analyses of "exiting a lawless state" (Hoff and Stiglitz, 2008), which is a no-rule-of-law state. If powerful asset strippers can coordinate and cooperate, they can indeed obstruct the emergence of rule of law; as they feel they would lose from such institutional reform, they might resist change and impede the formation of a strong constituency demanding rule of law (Hadfield and Weingast, 2014; Hoff and Stiglitz, 2004, 2008). In this understanding, asset strippers might favor extractive institutions as theorized by Acemoglu et al. (2001), meaning institutions that extract power and wealth from the many to the benefit of a restricted elite, thus limiting participation and rights of the broader population. Such dynamic is described as a typical evolutionary pattern by Pringle (2014) that suggests that these kinds of asset-strippers were already present in hunter-gatherer societies and laid the ancient foundations for the rise of inequality. Asset-strippers appropriated resources from commons (e.g., wildflowers growing in a forest), and by being able to store them, generated a sur-

plus. This gave way to behaviors of dominance over others that have consolidated further inequalities and the formation of extractive institutions.

When asset-strippers act in this way, networks behave as O-groups who advocate for policies that go to their favor at the expenses of the broader population, also adopting rent-seeking behaviors. Through rent-seeking (Hillman and Long, 2019; Tullock, 1967), O-groups obtain preferential profits at the expenses of the broader society, which suffer both a deadweight loss and the loss of resources that might have been spent for more productive uses (Aligica and Tarko, 2014; Choi and Storr, 2019). To the extent that this truly manifests, O-groups contribute to exacerbate the 'extractiveness' of institutions and to promote corruption to manipulate the allocation of rights and resources in their favor (Kurer, 2005).

Most often, these networks are structured as patronage networks, linking dominant elites to broader society through a series of patron-client relationships (North et al., 2009). Such networks act as the main conduits for the selective allocation of government goods to particularistic groups, the domination of chosen sectors of the economy, and the extraction of revenues – which are then channeled upwards and downwards, partly to the patron/clients and partly to the 'infrastructure' needed for the maintenance of the system (Jancsics, 2024:110). Patronage where the reward is a public sector job or taxpayer-funded service or payment is also a method of securing electoral support — i.e., a form of vote-buying (ibid). Finally, patronage networks are used to 'disarm ... checks ... by appointing members who are loyal to the state captor/patron to lead audit institutions' (ibid, p. 94).

More broadly, appointing clients or members of the captor elite to key positions in public administration and state-owned enterprises is a way to exert control over administrative and regulatory decisions, thus further benefitting the captor network and in the process, perpetrating patterns of state capture. Patronage networks may cross the dividing line between private enterprise and public position or regulatee and regulator, leading to arbitrary or biased decision-making and eroding rule of law in the process. In such a situation, not only are laws made to benefit particularistic interests, but they are also applied selectively and in a biased way. The impact of such practices is a form of re-distribution of resources and power from market- and independent public sector actors to captor groups. They affect both rule of law and socio-economic outcomes.

Usually, O-groups unite political and business elites, as in the case of crony capitalism (Aligica and Tarko, 2014) and political capitalism (Holcombe, 2018). As smaller groups, they are better able to coordinate and overcome collective action costs to effectively act as assets strippers that continuously shift the institu-

tional landscape in their favor. Importantly, O-groups can push for state capture (Fazekas and Tóth, 2016), thus manipulating law-making and enforcement to their benefit, and controlling it so that these practices become legal (Stigler, 1971).

Considering Putnam's (1993a; 1993b) understanding of social networks, P-groups instead play a positive role in building social capital, as they nurture solidarity, reciprocity, and civic virtue (Degli Antoni and Grimalda, 2016). They can encourage people to trust each other and enter networks of impersonal relationships, where being a member of a group/having a certain identity plays a less dominant role for trust and cooperation.

We hypothesize that P-groups may foster rule of law. A possible mechanism for this is the following: as bridging social capital is built up, citizens tend to develop positive beliefs and expectations about each other's compliance with the law, which then can positively influence their willingness to bear parts of the costs of coordinating to challenge abuse by the government (Weingast, 1997). P-groups that foster social capital can support organizational aspects of collective action and based on mutual trust, help mobilization against violations of rule of law (Dimitrova and Buzogány, 2014). Contemporaneously, their focus on universalist values reinforces rule of law while it tends to delegitimize any attempt of impartial and arbitrary management of public resources.

4.1.2 From Rule of Law to Networks

The rule of law may also affect the emergence and development of networks. How societies design institutions influence the pattern of social interactions and the existence of specific forms of human organization. Beckert (2010) suggests that institutions legitimize certain networks but not others, for example by defining which kind of associations and gatherings are permitted and what kind of resources they may have access to. As North et al. (2009) argue, states can limit access to contractual organizations and the right to form them to members of the dominant coalition, thus making the possibility of forming new organizations a privilege. In such a scenario, the resulting social order is of 'limited access' type (also 'limited state' cf. North et al., 2009). Most likely, social interactions and networks will then be based on the interest of keeping such privilege. Furthermore, maintaining relationships with the government becomes strategic as they represent the source of such privilege. Thus, more elitarian, hierarchical, and state-reliant organizations will emerge, rather than more impersonal, citizen-based, horizontal, and autonomous ones.

Thus, in a limited access social order where only a small coalition of elites has access to political and economic power, members of the dominant coalition will perceive that rent-seeking and collusion with the government is the only way to access economic and political benefits (North et al., 2009), possibly acting as O-groups. They will see cooperation with others outside the dominant coalition as more costly and rather prefer acquiescence with the sovereign at the expense of other groups in society (Weingast, 1997). Specifically, if state institutions and the rule of law are robust, O-groups might resort to rent-seeking behavior to obtain benefits in the official economy; under weak rule of law, instead, they might resort to rent-seeking outside of the formal economy and penetrate political institutions as well. In the case of an O-group, entry costs in the rent-seeking market may be lower in both situations because members of this network have preferential access to rents and are well-connected, which lowers the entry costs of competing for them. By reducing competition, this method also ensures higher rents, or more benefits (Aligica and Tarko, 2014).

With respect to the previous point, Aligica and Tarko (2014) describe how crony capitalism enters the picture when the government cannot solve the commitment problem. This is a situation in which the government is not able to credibly commit to non-expropriation or arbitrary interference with economic activities and property rights (Acemoglu, 2003). Under such conditions, economic elites will resort to "crony relations" to create trust between the economic and the political sectors and thereby increase (private) predictability.

Robinson and Acemoglu (2012) stress the relevance of political competition to exit a status quo in which crony capitalism has consolidated. As competition – even if among different O-groups – increases, it becomes more difficult for the governing party to only appease one group. Greater diversification in the distribution of benefits weakens the position of advantage of a single O-group and thereby relaxes the degree of extractiveness of the institutional setup. This might imply that competing O-groups, even unintentionally, can slowly produce more procedural and substantive equity, although competition is not always a sufficient condition for achieving this outcome (Mazepus et al., 2020).

In other cases, institutional weaknesses favor the emergence of networks, which replace the state in the provision of public and club goods (Dimitrova, 2010; Mokyr and Tabellini, 2024). These networks carry out this role either in a way that reflects universalist values or, selectively, favoring specific groups over others, i.e., distributing personal privileges as happened during communism and after its collapse (Ganev (2007) cited in Dimitrova (2010)). In sum, networked coordination among citizens can work as either a rule of law facilitating mechanism or a

weakening one.

Simultaneously, rule of law exerts influence on these networks. Thus, there is a bidirectional linkage between the two, and networks can be potentially the cause and a consequence of rule of law.

4.2 Rule of Law – Informal Institutions

4.2.1 From Informal Institutions to Rule of Law

Informal institutions can play a key role in either increasing or undermining rule of law. By providing cognitive frameworks through which people interpret the world (Beckert, 2010), informal institutions can shape perceptions of the appropriate limits of public powers – judicial, executive, and legislative – and influence the definition, recognition, and sanctioning of their abuses (Licht et al., 2007). Moreover, the diffusion of bundles of values and beliefs that shape informal institutions, such as individualism, impartiality, and moral universalism, plays a key role in fostering the demand for rule of law. In contrast, a consolidated prevalence of collectivism and particularistic morality usually works against the rule of law (Gorodnichenko and Roland, 2011; Hofstede, 2001; Kyriacou and Trivin, 2024; Kyriacou, 2025; Licht et al., 2007). As Licht (2008) explains, egalitarian values foster the perception that all persons are morally equal and having more power does not legitimize receiving privileges or a differentiated treatment before the law.

More group-oriented values, as implicit in collectivist societies and where particularistic morality is prevalent, tend to undermine the perception that individuals – when disconnected from their group of belonging - are substantially equal. Such substantial equality of human beings, however, and regardless of their group of belonging, is at the roots of rule of law. This resonates with Licht et al. (2007) who find that in societies endorsing embeddedness, where the individual finds one's identity depending on relationships with others – i.e., the family, the clan – rule of law's call for individual entitlements finds a less fertile terrain. Quite on the contrary, societies where people value autonomy (Schwartz, 1992) are more inclined to require stable laws and well-defined individual entitlements, as instruments that can help them decide and plan their actions independently (Licht, 2008; Raz, 1979).

In modelling obstacles to the emergence of rule of law in post-communist societies, Hoff and Stiglitz (2004) affirm that if enough agents in the population have civic virtue – meaning they demand rule of law regardless of their private interests –

the ability to strip assets decreases and there will be an enlarged constituency demanding rule of law. Other literature also finds that basic human values, especially self-transcendence and conservationism (Schwartz, 1992) influence voters' support for less or more authoritarian governments, which are normally associated with stronger or weaker democratic institutions and rule of law (Baro, 2022; Hajnal, 2024).

On a similar note, Mokyr and Tabellini (2024) reconstruct the causes of divergence in the development of political institutions in China and Western Europe. In doing so, they explain how in China, values centred on the family, the cult of the ancestors, loyalty to the ruler, and primacy of the collective have favored autocratic and centralized political institutions. In contrast, in Western Europe a more universalistic value system promoted decentralized and representative political institutions and set the foundations for rule of law (Henrich et al., 2010). In both areas of the world, cultural elements co-evolved with different kinds of social organizations, i.e., family structures and networks and acted as complements to the development of political institutions (Mokyr and Tabellini, 2024; Schulz et al., 2019).

Rule of law and informal institutions belong to two different normative social orders (Hadfield and Weingast, 2014): in the former, an identifiable legal authority evaluates behaviors according to clear and publicly available laws and sanctions are externally imposed and enforced. Under the latter, instead, evaluations of behavior are socially based, enacted through shared beliefs, and enforcement occurs through informal non-legal sanctions (Fehr and Gächter, 2000). Previous research has examined the relationship between these two distinct normative social order types, showing that they can either function as complementary and co-exist (Aoki, 2001; Belloc and Bowles, 2013) or one may gradually replace the other in terms of legitimacy and prevalence, ultimately resulting in changes to the institutional landscape as a whole (Amendolagine and von Jacobi, 2023; Grosjean, 2011; Williamson, 2009).

Informal institutions and rule of law can therefore also be interpreted as substitutes, as two different means of settling certain situations and disputes. When non-legal enforcement methods relying on a specific reference group — such as ostracism, moral sanctions, or social exclusion — are robust and provide high level of predictability, they may reduce individuals' reliance on legal enforcement and demand for functioning courts and administrative procedures, which are defining elements of rule of law. Mokyr and Tabellini (2024) emphasize that informal mechanisms of self-regulation, while often functional, may conflict with rule of law components that prioritize individual rights and democratic accountability.

In other cases, the two can be complementary. Legal systems often face structural inefficiencies — such as slow judicial processes or limited administrative capacity — that hinder their ability to enforce norms effectively, undermining rule of law. In such cases, informal institutions like social stigma or reputational incentives can enhance deterrence, helping bridge the gap between *de jure* norms and *de facto* compliance. As Hodgson (2025:1) argues, 'informal rules often play a vital role in the enforcement of legal rules', also because the latter is more efficient in a social environment of compatible shared norms (Cooter, 1997; North, 1993; Voigt and von Jacobi, 2025). For example, while a thief may be sentenced by a legal court, community condemnation or loss of trust within a reference network may add a parallel form of accountability and reinforce the deterrent effect of (weak) legal punishment. As Elinor Ostrom's works (1990; 2005) on polycentric governance and subsidiarity demonstrates, community-based informal rules can effectively complement state-based regulation, if they do not contradict fundamental principles such as non-discrimination, due process, and individual rights. These represent clear pathways through which informal institutions can reinforce rule of law.

4.2.2 From Rule of Law to Informal Institutions

While much of the academic debate has focused on the influence of informal institutions on rule of law, the reverse causal direction — the influence of rule of law on informal institutions — is also possible, as rule of law can influence the evolution of values and social norms (Aldashev et al., 2012). Indeed, a well-established rule of law reduces individuals' dependence on group-based hierarchies and informal power networks as sources of stability and predictability (Kyriacou, 2025). Moreover, if the law treats people equally, these are less likely to consider power asymmetries as legitimate (Kyriacou, 2025). Prior research indicates that power distance – as a measure of the acceptance of power asymmetries – predicts both tolerance and prevalence of corruption across societies (Boateng et al., 2024), potentially due to a lower propensity to challenge authorities (Hofstede, 2001).

Conversely, in contexts where rule of law is weak or ineffective, because public authorities lack predictability and impartiality, individuals may be more inclined to rely on informal institutions. Amendolagine and von Jacobi (2023) find this to be true also where historical patterns have constantly replicated extractive institutions to the detriment of the majority: in such contexts, informal institutions tend to dominate the institutional landscape more than in contexts in which more participatory and inclusive historically trajectories have strengthened formal

institutions and their legitimacy within the population.

This suggests a potential substitution effect: as formal legal systems expand and become more effective, they may reduce the social role and perceived legitimacy of some informal norms. Yet, this expansion is not cost-free. While rule of law is associated with desirable outcomes such as legal certainty, impartiality, and predictability, it may also impose social costs, particularly when it clashes with long-standing cultural practices or informal arrangements. For instance, this is the case for rule of law demanding equal treatment for men and women, while cultural practices impose strict discriminatory gender-based practices and roles in society. Even in its 'thin' conception - focused primarily on equality before the law and procedural impartiality - rule of law reduces reliance on community-based enforcement and particularized trust-based mechanisms, such as social ostracism, informal mediation, or moral condemnation, which often operate outside the legal domain, and might face greater condemnation and stigma under a robust rule of law. As legal uniformity advances, the relevance of locally embedded norms - and of collective identities or networks enforcing these - may diminish, particularly in tightly knit or traditional communities where informal institutions have long served as primary tools of governance.

Whether informal institutions and rule of law will be complements or substitutes, also depends on formal legality (cf. Fuller, 1969). When laws are unclear or costly to understand, individuals have greater incentives to rely on non-legal mechanisms for protection and predictability (Posner, 1997). Contrarily, a strong rule of law can reduce the benefits or increase the costs of compliance with conflicting social norms (Posner, 1997). If legal remedies are effective, the costs of relying on corruption or favoritism to access political and economic privileges might increase, as there is a higher chance to be caught and punished.

What is important to note is that rule of law may reduce internal social cohesion if not accompanied by cultural legitimacy, or if perceived as an external imposition. If rule of law is based on cognitive frames that delegitimize other worldviews, it can cause indirect and undesired effects by delegitimizing culturally rooted informal institutions, which can lead to value conflicts (Calabresi and Bobbit, 1979). Furthermore, the institutionalization of legal procedures, while enhancing objectivity and predictability, can reduce the flexibility and adaptability that informal institutions typically provide. In conclusion, while rule of law can crowd out certain informal institutions — particularly those rooted in exclusionary or opaque practices — it can also coexist with and be reinforced by other informal institutions.

4.3 Rule of Law – Socio-Economic Outcomes

As introduced in Section 3.4, SEOs encompass both material and immaterial dimensions of well-being, such as employment and income, health and education, productivity and innovation. We also consider various forms of inequality — by gender, race, class, or exposure to environmental degradation as relevant elements of societal well-being. Considering a multitude of SEOs clearly hampers the ability to precisely define each single connection and causation pattern. Here, we frame how rule of law and such bundle of SEOs tend to be related. SEOs are not only shaped by the structure and functioning of rule of law, but they also influence rule of law themselves. In investigating the latter directionality, i.e., the potentially causal relationship running from SEOs to rule of law, a disclaimer is necessary: SEOs are always socio-economic "conditions" taken as a snapshot in a given moment of time. Their naming as "outcomes" should therefore not impede to conceive of a bidirectional relationship in which socio-economic conditions also affect the emergence/strength/backsliding of rule of law. The relationship is therefore bidirectional and frequently self-reinforcing.

4.3.1 From Rule of Law to Socio-Economic Outcomes

Rule of law plays a fundamental role in promoting economic growth by establishing and developing predictable and transparent legal frameworks that provide legal certainty. This legal environment significantly reduces transaction costs and curbs corruption, thereby creating a more efficient and trustworthy marketplace. By protecting property rights and ensuring the enforcement of contracts, rule of law also fosters investors' confidence and encourages both domestic and foreign investment. Such trust in market institutions is essential for their smooth functioning and has been extensively documented in the literature (e.g., North (1990); Acemoglu et al. (2001); see Haggard and Tiede (2011) for a comprehensive review). Moreover, by securing property rights and enforcing contracts, rule of law also provides economic agents with the confidence to make long-term plans and investments. This includes investments not only in physical capital, such as machinery, infrastructure and technology, but also in human capital, including education and professional training (North and Thomas, 1973; Haggard et al., 2008).

More specifically, Williamson (1985) emphasizes that a poorly functioning judicial system fosters opportunistic behavior. This increases transaction costs and discourages specific investments, namely investments tailored to particular re-

lationships or uses that are difficult to redeploy in other transactions or uses.[7] Similarly, North (1990:54) identified weak property rights enforcement as "the most important source of both historical stagnation and contemporary underdevelopment in the Third World". Nunn (2007) offers empirical evidence of these theoretical predictions. Based on the index of "the rule of law" from Kaufmann et al. (2003), he finds that the quality of legal enforcement is a source of comparative advantage. Namely, countries with good contract enforcement specialize in industries where relationship-specific investments are most important. According to the estimates, contract enforcement explains more of the global pattern of trade than do countries' endowments of physical capital and skilled labor combined.

Quite similarly, Laeven and Majnoni (2005) find that the indicator of the rule of law in the Country Risk Guide is associated with a reduction of the spread between lending and deposit rates. Empirical evidence by Acemoglu et al. (2001) further supports this view of a positive relationship between rule of law and economic transactions, demonstrating that the quality of property rights enforcement has an impact on countries' future GDP levels. By reducing uncertainty and risk, rule of law then creates incentives for economic agents - e.g., firms and households - to commit physical and non-physical resources - e.g., knowledge - over extended periods, which is a necessary condition for explorative innovations and economic growth.

Olson (2000) explores the institutional foundations of economic growth, arguing that prosperity is primarily determined by stable institutions that secure property rights, enforce contracts, and uphold rule of law. Olson emphasizes that democracy, particularly when accompanied by constitutional checks on executive power - namely by rule of law - is crucial to long-run economic performance. However, he also notes that democracy alone is not sufficient. What truly matters is the degree to which democratic systems embed constraints on arbitrary government action, which recalls rule of law. In his view, the most prosperous societies are those that succeed in limiting predation by rulers and ensuring that political power is exercised within a legal framework. This institutional predictability, he argues, is essential for encouraging investment, innovation, and productive economic behavior. Hence, Olson shows that growth is not simply a function of adopting capitalist principles or free markets, but rather of building and maintaining political institutions that constrain power and foster trust in economic and legal systems.

In terms of empirical evidence, early research on the association between rule of law and economic growth relied on composite indicators and generally documented

[7] For a recent critical review of the literature on transaction costs, see Vatiero (2020).

a positive and statistically significant effect of rule of law on economic growth (Barro, 1999; Barro and McCleary, 2003; Dollar and Kraay, 2003; Knack and Keefer, 1997; Rodrik et al., 2004) These studies suggested that a strong(er) rule of law plays a critical role in fostering economic outcomes.

More recent empirical analyses, however, have produced more nuanced findings. Several studies suggest that the positive impact of rule of law on growth is contingent upon contextual factors, such as a country's geographical location, level of development, legal origins and institutional maturity. For instance, Haggard and Tiede (2011) find that the correlation between rule of law and economic growth is significantly stronger in industrialized countries than in developing economies, where rule of law and the connected institutional environment may be more fragile or unevenly applied. To clarify and generalize the economic effects of rule of law, Shamugia (2025) conducted a comprehensive meta-regression analysis incorporating 466 estimates drawn from 72 empirical studies. The findings reveal a modest yet robust positive effect of rule of law on overall economic performance. This result underscores the importance of rule of law and consequent legal institutions in shaping growth trajectories, even as the magnitude of impact may vary depending on specific national characteristics.

Moreover, rule of law has been put into connection with other, broader, social and environmental outcomes, such as environmental pollution and social inequalities. Castiglione et al. (2015), examining data from 33 high-income countries over the period 1996–2010, first find a significant positive relationship between rule of law and income per capita, suggesting again that stronger legal institutions are conducive to economic development. However, they also find a negative association between rule of law and CO_2 emissions, implying that countries with more robust legal systems tend to have better environmental outcomes. Nevertheless, the reverse causality does not hold: lower pollution levels do not necessarily associate with stronger rule of law. These findings are complemented by other studies that explore the interplay between institutional quality and environmental governance. For instance, Cole (2007) identifies a positive relationship between corruption and per capita emissions, while Desai (1998) links corruption to broader patterns of environmental degradation. Moreover, Fredriksson et al. (2004) find that corruption undermines the effective implementation of energy and environmental policies. Atta and Sharifi's (2024) systematic literature review, which synthesises studies on this relationship, confirms that most research demonstrate a positive relationship between a strengthened rule of law and greater environmental sustainability. Furthermore, rule of law can mitigate the detrimental consequences of trade liberalisation, foreign direct investment, and financial sector development

on the environment.

Further empirical support for rule of law being conducive to social sustainability comes from Bhagat (2020), who finds a robust relationship between adherence to rule of law and income equality. This indicates that stronger legal institutions may contribute to a more equitable distribution of income. Similarly, Barajas-Sandoval et al. (2023) identify a negative correlation between gender inequality and the quality of rule of law. In particular, they highlight how stronger legal frameworks reduce the productivity gap between women-led and men-led firms — especially in sectors like manufacturing — by compensating for women's relative disadvantage in personal networks and providing legal protection against discriminatory or unfair business practices to which women-led firms may be exposed.

Apart from evidence tied to aggregate measures of rule of law – which have been prevalently used in the past, empirical evidence on more specific sub-indicators has increased. Such effort is in line with critiques advanced against the use of aggregate measures as being too approximate. As Haggard and Tiede (2011) for example show, the typically used aggregate indices may perform better in some parts of the world than in others. The authors suggest that composite measures display higher correlation with economic performance than discrete components of rule of law, but this holds more in industrialized countries than in developing ones. In line with our approach to socio-economic outcomes (see Section 3.4), we suggest that composite measures may not be very helpful for identifying specific transmission mechanisms through which rule of law influences economic growth and broader socio-economic outcomes. Composite indices typically obscure important institutional nuances, and allow compensation across multiple dimensions (Lustig, 2011; Ravallion, 2012) making it difficult to determine which elements of rule of law are most effective in promoting economic growth. Thus, it is important to undertake a closer examination of the core components of rule of law — i.e., judicial independence, prosecutorial integrity, and institutional accountability — to better understand through which precise mechanisms rule of law exerts its economic impact.

Judicial independence is granted when politicians refrain from attempting to influence, reward, or punish judges, or from manipulating judicial careers (Ramseyer, 1994), and/or when judges take decisions without being swayed by political factors, such as the electoral strength of the parties involved (Landes and Posner, 1975). In this context, judicial independence plays a pivotal role in ensuring that the executive branch is constrained by constitutionally defined limits, thereby fostering a predictable and impartial legal environment. Indeed, judicial independence can provide stronger protection against expropriation and encour-

age greater levels of investment (Klerman and Mahoney, 2005). For example, Lambert-Mogiliansky et al. (2007) demonstrate that local politicians in Russia, by exerting influence over judges, negatively affected the performance of firms undergoing bankruptcy proceedings.

However, judicial independence depends not only on *de jure* provisions but also on their *de facto* implementation (cf. Hadfield, 2008). In this regard, Feld and Voigt (2003) distinguish between two types of judicial independence: (i) a *de jure* indicator, which measures legal or constitutional provisions guaranteeing judicial independence, and (ii) a *de facto* indicator, which reflects the degree of independence observed in practice. In their empirical analysis of 57 countries, they find that while *de jure* judicial independence has no significant effect on real GDP growth per capita, *de facto* one is positively and significantly associated with economic growth. Further research by Voigt et al. (2015) confirms that improvements in the practical judicial independence are associated with positive economic payoffs, as countries with more *de facto* independent courts tend to experience faster economic growth.

Judicial independence is even more effective when complemented by judicial accountability mechanisms, which ensure that judges operate within clearly defined legal boundaries. Hayo and Voigt (2014) highlight that procedural safeguards such as the right to legal counsel, the use of written rather than oral proceedings, and guarantees of timely adjudication, are associated with improved judicial performance and contribute to better economic outcomes. Similarly, the role of public prosecutors is crucial. When prosecutors are both independent from political influence and held accountable for their decisions, they help ensure that criminal laws are applied fairly and without bias. This promotes public trust in the legal system and deters corruption. Empirical evidence supports this view: Van Aaken et al. (2010) find that prosecutorial independence is negatively correlated with corruption levels. Given that corruption is consistently shown to be harmful to economic growth (Gupta et al., 2002; Mauro, 1995, 1998), the promotion of independent prosecutorial institutions can be understood as an indirect but powerful channel through which rule of law contributes to economic development.

The presence of institutional checks and balances – particularly horizontal accountability mechanisms such as regulatory agencies, constitutional courts, and independent oversight bodies – also supports stronger rule of law and improved economic performance. For instance, Schedler et al. (1999) and Henisz (2000a,b) demonstrate that countries with stronger checks on executive authority attract more foreign direct investment and achieve higher levels of economic growth. These findings underscore the importance of decomposing rule of law into its con-

stituent institutional dimensions to better understand how it supports long-term socio-economic development.

In a broader view, to ensure impartial treatment and predictable scenarios, rule of law is often expressed through formalistic procedures. For example, Hayo and Voigt (2014) empirically argue that certain elements of formalism can be beneficial for economic growth. Although these procedures may slow down judicial proceedings, they can also enhance the predictability of court decisions and, as a consequence, promote transactions and investment. By contrast, Djankov et al. (2003) find that countries with a high degree of formalism, typically those with civil law systems, tend to have slower courts, which negatively affects economic performance.

A further aspect to consider is judicial inefficiency or delay, which undermines legal certainty and, even if indirectly, constitutes a contraction of rule of law — this concern is explicitly recognized in many constitutional frameworks, such as the Article 29 of the Swiss Federal Constitution, the Sixth Amendment of the U.S. Constitution, and the Article 111 of the Italian Constitution, which refer to the requirement of a reasonable duration of proceedings. Within the voluminous body of empirical literature examining the economic implications of judicial delay, which we can see as a proxy for a weakened rule of law, the contributions of Chemin (2009a,b, 2012) are particularly notable. His empirical analyses demonstrate that judicial delays significantly impede access to credit and adversely affect sectors more dependent on legal enforcement, such as registered manufacturing and trade. Moreover, he finds that more efficient courts foster higher levels of entrepreneurship and investment. Additional support for these findings is provided by Ponticelli and Alencar (2016), who investigate the impact of court congestion on bankruptcy proceedings in Brazil. Their evidence indicates that speedier courts have a positive effect on corporate investment. Lastly, the efficiency of judicial systems has also been shown to influence firm size: both Fabbri (2010) using Spanish data, and Giacomelli and Menon (2017) using Italian data, find a robust positive correlation between judicial efficiency and the scale of firms operating within a given jurisdiction.

4.3.2 From Socio-Economic Outcomes to Rule of Law

In investigating the reverse directionality from SEOs to rule of law, the role of socio-economic inequalities is particularly relevant. Inequality can influence the cognitive, instrumental, and moral reasons that support compliance with rule of law (Vieira, 2007). First, low levels of education or high levels of poverty among

a relevant portion of society can erode the shared understanding of rule of law, which is essential for mobilising collective action against abuses of power. Second, inequality can distort individuals' incentives to challenge arbitrary power. When inequality is severe, disadvantaged groups may perceive that challenging power will yield few tangible benefits, or worse, expose them to retaliation (see Lyons et al., 2017). Third, inequality can erode mutual expectations of fair treatment and trust in legal institutions by weakening what Fuller (1969) termed "moral reciprocity", namely the shared belief that others will also comply with legal norms and that the system is impartial. In this way, inequality may diminish the moral legitimacy of legal authority.

Nonetheless, the empirical and theoretical literature is not unified on the precise effect of inequality on rule of law. Acemoglu (2003) present a model of kleptocracy in which political elites extract wealth for personal gain while facing limited resistance from the general population. In such regimes, the state is run for the benefit of a narrow elite, flagrantly violating the principle of impartiality fundamental to rule of law. Yet, kleptocrats may remain in power through a "divide-and-rule" strategy, fragmenting the population and thus exacerbating the collective action problem (Olson, 1965). By co-opting a pivotal, more productive group, often via selective redistribution or privileges, the regime impedes the formation of broad-based opposition. The feasibility of this strategy is enhanced in settings of high intergroup inequality and low national productivity, where bribery is relatively inexpensive and effective. Paradoxically, as inequality continues to rise, the pivotal group may accumulate sufficient economic and political resources to resist co-optation, eventually becoming a counterweight to authoritarian rule, and thereby setting a first step towards checks and balances.

By contrast, Mizuno et al. (2017) arrive at an opposite conclusion: greater inequality is more likely to entrench extractive institutions and obstruct the development of rule of law. In their theoretical framework, rulers weigh the short-term benefits of wealth expropriation against the risk of being overthrown. The ruler's incentives and choice depend on whether citizens can have a real influence on his or her survival. In the model, higher inequality between citizens makes the probability of the ruler's survival inelastic to his/her choice, meaning that citizens are less - or not at all - responsive to institutional change. Indeed, large inequality between groups means that the majority of the population will have few material and organizational resources to build effective opposition, which in turn decreases the costs for the ruler to impose extractive institutions. Under these conditions, the ruler is more likely to maintain extractive institutions without facing meaningful resistance.

Kyriacou (2025) argues that highly stratified and hierarchical societies are structurally less conducive to rule of law. Elites at the top may have incentives to capture or distort governance to preserve their privileges, while marginalized groups at the bottom may rely on informal networks, such as clientelism or patronage, to secure basic protections—thereby unwarrantedly undermining formal legal mechanisms in the process.

Finally, Gutmann and Voigt (2018) take a more institutionalist stance, finding that historical trajectories and geographic endowments — mediated by long-standing institutions — exert greater influence on the quality of rule of law than income distribution *per se*. According to their analysis, path dependence and initial conditions often outweigh short-term socio-economic determinants in shaping legal development.

Overall, the causation between rule of law and SEOs can be circular. A bidirectional and reinforcing relationship between inequality and institutional quality has been suggested before (Sokoloff and Engerman, 2000). Chong and Gradstein (2007) similarly hypothesize that a high initial level of income inequality impedes the development of strong institutions (including, but not limited to, rule of law). In turn, weak institutions perpetuate or exacerbate income inequality, creating a self-reinforcing cycle. Their analysis supports the view that inequality and institutional underdevelopment are mutually reinforcing, posing significant challenges to inclusive growth.

4.4 Networks – Informal Institutions

Networks and informal institutions are deeply interwoven components of the social fabric. Networks can be considered arenas where values and social norms are shaped, diffused, and enforced. The relationship between networks and informal institutions is coevolutionary and bidirectional. On the one hand, prevailing informal institutions influence who interacts with whom and under what conditions, thus shaping the structure of networks. On the other hand, once established, networks reinforce and diffuse the value systems and social norms of their components (Beckert, 2010).

4.4.1 From Informal Institutions to Networks

Informal institutions play a foundational role in modelling the formation of social networks, who joins them, and how they evolve. Two primary mechanisms drive

this influence: homophily and informal rules of access.

Homophily is the tendency of individuals to associate with others who are similar to themselves (McPherson et al., 2001), where similarity may concern physical traits, but also – and more crucially here – values, beliefs, behaviors, and identities. This principle helps explain why networks often emerge along lines of class, ethnicity, religion, or ideology. People are more likely to build ties with those whose norms they recognize and trust because they are similar to their own. Homophily leads to network formation patterns that reinforce internal cohesion but tend to limit cross-groups interaction. Studies show that identity's salience is not fixed but mediated by social norms and the context. Some features — such as lineage or ethnicity — are particularly salient in high-stakes environments like civil conflict, where they act as powerful selectors of affiliation and hostility (Henrich, 2016; Moscona et al., 2020). In contrast, class or ideology may dominate in contexts of redistribution or political competition (Giuliano and Spilimbergo, 2014).

Scholars have long studied the classification of networks based on identity orientation, which leads to the distinction between in-groups and out-groups. As Allport (1954:42) notes, in-groups are 'psychologically primary' in the sense that people have an inevitable predilection for what is familiar and tend to reinforce their group identity, but this does not necessarily imply hostility toward out-groups. Identification processes are however central to network formation: individuals internalize roles and group attachments based on socially recognized expectations (Akerlof and Kranton, 2010), making values and norms key inputs into how relational boundaries are drawn (Creed et al., 2014).

The second mechanism through which informal institutions shape networks is access governed by informal rules of belonging, particularly kinship or community affiliation. Where formal mechanisms of inclusion are weak or absent, access is often regulated through family ties or tribal loyalties. These norms determine who is granted access to political and economic power, often concentrating influence within dominant kinship-based elites (Mokyr and Tabellini, 2024). In this perspective, networks often mirror the boundaries established by local systems of social acceptance and trust, reproducing exclusionary dynamics across generations.

Together, these mechanisms show how informal institutions condition the inclusiveness of networks. Individuals do not form ties at random: informal institutions define what kinds of relationships are considered legitimate, desirable, or trustworthy. Interpersonal connections, like friendships, exchanges of favors or professional relationships, that recursively influence individual choices, behaviors,

and outcomes (Jackson and Wolinsky, 1996; Kandel, 1978) are shaped by the possibility to 'belong' to others that we 'value' (von Jacobi and Nicholls, 2024), also based on the values and norms they represent.

These dynamics can affect the topology of networks — whether they are centralized or decentralized and dense or sparse. Highly clustered or centralized networks tend to entrench specific group norms, reinforcing internal loyalty, and restricting the circulation of alternative perspectives. In contrast, decentralized and horizontally structured networks are more likely to accommodate diversity, enabling the coexistence of plural value systems and interaction among distant individuals (von Jacobi et al., 2024; Krishnan and Sciubba, 2009; Rindova et al., 2009).

4.4.2 From Networks to Informal Institutions

Networks are the skeletons of interacting systems that carry complex dynamic phenomena like the spreading of information, rumors, innovations, or values. There are analogies to epidemic processes, however, social contagion is a complex spreading phenomenon, meaning that the change of the status of a node is influenced by several neighbors simultaneously (Centola, 2010). A plethora of models has been formulated to describe how people's opinions change as a consequence of social interactions and other factors like media impact as well as how network structure influences such processes. These include discrete and continuous opinion dynamics models, threshold models, majority rule-based models, one- and multi-dimensional models, etc. (Peralta et al., 2022).

The existence and durability of an informal institution itself require a network — a *reference group* — that provides meaning, application context, legitimacy, and enforceability. Networks serve as the social infrastructure that allows values and norms to emerge, gain relevance, and persist over time. This essential role operates through three interrelated mechanisms: transmission, enforcement, and reciprocal expectations of conformity.

First, networks are crucial in the transmission of values, both vertically across generations and horizontally among peers. Vertical transmission occurs, for instance, when parents pass their beliefs and norms to their children. Horizontal transmission takes place within peer groups —such as colleagues, friends, or others whose opinions we value and trust — and constitutes a powerful mechanism of cultural continuity and reinforcement. Bursztyn et al. (2021) show that participating in political protests alongside one's social network leads to sustained civic engagement. Their findings highlight how mobilisation can support democratic

values and foster collective action. However, the same communities that foster cooperation can also serve as vehicles for destructive behavior. This is particularly evident in Cagé et al. (2023), who document how networks of WWI heroes in France contributed to the diffusion of authoritarian values and Nazi collaboration during the Vichy regime. Similarly, Satyanath et al. (2017) demonstrate that high association density in interwar Germany facilitated faster membership of the Nazi Party, illustrating how network structures can accelerate the dissemination of harmful ideologies under specific political conditions.

Second, the network itself frequently serves as the key enforcement mechanism — as an alternative to the state, which typically underpins enforcement of the rule of law (Chandrasekhar et al., 2018). This dynamic is particularly evident in the case of so-called relational contracts (e.g., Galanter, 1981; Levin, 2003; Macaulay, 1963; MacLeod, 2007; Williamson, 1979). These are informal agreements — such as *quid pro quo* arrangements between parties (Baker et al., 1994) — that are sustained not through legal enforcement but through the network itself. In relational contracts, enforcement is exercised *ex post* by the socio-economic network, which can stigmatize opportunistic behavior. Specifically, the threat of social stigma — or reputational damage — encourages parties to honor their commitments, even in the absence of formal legal mechanisms. With notable differences, a similar underlying logic can be found in the case of digital (non-public) enforcement, such as in blockchain digital networks, particularly in the context of smart contracts (see Vatiero, 2022, 2024).

Third, networks generate reciprocal expectations of conformity (Bicchieri, 2005). Individuals do not merely follow norms because they believe them to be right, but also because they expect others in their reference group to hold the same beliefs — and to expect the same from them. Without this mutual understanding, norms lose their legitimacy and are unlikely to be enforced. Social norms, in other words, only function when the group shares not only the rule but the expectation that it will be upheld by others.

Alongside the mechanisms that confer legitimacy to values, the structure of a network makes certain identities more salient than others. People hold multiple identities — based on profession, ethnicity, religion, gender, etc. — but depending on the context and composition of the network, some identities become more prominent. In a church group, religious identity may become central; in a political party, partisan alignment may take precedence. In this perspective, Murphy and Shleifer (2004) argue that individuals are highly susceptible to social influence, particularly within their networks. Entrepreneurs often build networks around issues that resonate deeply with members — such as religious identity or union

wages — and later 'rent out' these networks to politicians seeking votes and support for initiatives and ideas that may have little to do with the members' original concerns. In a complementary fashion, Luttmer (2001) shows how racial group loyalty shapes attitudes towards redistribution, revealing that people tend to increase their support for welfare spending when the share of local beneficiaries from their own racial group grows.

Networks also tend to reinforce dominant norms internally. As previously discussed in Section 4.4.1, homophily leads to internal alignment. Over time, this alignment strengthens conformity and marginalizes alternative behaviors. The same mechanisms that bring like-minded individuals together also serve to stabilize and reproduce shared norms over time – while contrasting them to other values and norms that are not cherished within the network. According to critical mass theory, committed minorities can, however, successfully induce change of social norms (Centola et al., 2018). Thus, networks provide an environment in which informal institutions evolve.

In sum, the interaction between networks and informal institutions is essential to understanding the persistence and transformation of patterns of social cooperation and conflict. Networks can either foster inclusion and civic engagement or enable exclusion and the manipulation of rules for private gain. The result largely depends on the values and social norms they uphold. Consolidated or newly emerging values and norms, reversely, can confirm or disrupt network formation patterns. This linkage is a central mediating element to the analysis of how networks affect rule of law and SEOs. Moreover, to the extent that a multitude of different networks populate the same society, it may become crucial to understand to which extent the informal institutions promoted by one network 'clash' against those of another network/the broader society (cf. 'cognitive conflict' in Adams et al., 2003; Lorenzini and von Jacobi, 2024).

4.5 Networks – Socio-Economic Outcomes

This section focuses on the mutual relationship between networks and SEOs. The structure and functioning of networks shape socio-economic outcomes, but these outcomes also influence how networks emerge, evolve, and function. As for Section 4.3, a disclaimer holds that investigating the relationship running from SEOs to rule of law, the naming of SEOs as "outcomes" should not prevent an understanding of a bidirectional relationship in which socio-economic conditions also affect the emergence, topology, and functionality of networks. In outlining the bidirectional link, it is important to remember that multiple levels operate

simultaneously: for the single individual, socio-economic conditions refer to one's socio-economic background. This feature has been studied and put into connection with one's position within a social network. Beyond the individual level, however, socio-economic conditions also speak about aggregate wealth (e.g., GDP, poverty, human development) and about disparities in its distribution (e.g., socio-economic inequalities). At such a societal level, networks are viewed upon mainly in terms of their overall topology and functionality. The literature on these different levels, interactions across them, and respective different directionalities is scattered.

4.5.1 From Networks to Socio-Economic Outcomes

Network structures — from macro patterns of connectivity to individual centrality within a network — govern access and transmission of information, resources, and behavior flows. The combined individual and collective level effects of network structures therefore shape a series of SEOs including employment, education, health, and socio-economic inequality more broadly. More specifically, by determining who has access to information and resources, networks can enhance or hinder individual and collective socio-economic advancement, as well as the distribution of benefits. Their influence therefore extends to both wealth creation and the reproduction or mitigation of inequality.

As emphasized by Jackson et al. (2017), the macro and micro characteristics of social networks — such as degree distributions and centrality measures — have measurable consequences for diffusion processes, learning, and behavioral norms. For example, tightly knit networks can significantly enhance the flow and reliability of information. When friends of an individual are also friends with one another, news about that individual's behavior — such as misconduct — spreads more quickly and comprehensively, enabling others in the network to adjust their actions accordingly. Moreover, such clustering facilitates social coordination: closely connected individuals are better able to collectively sanction norm violations, for instance through social ostracism. In this way, local friendship structures not only shape how behavior is observed and interpreted but also determine the collective capacity to enforce social norms (Jackson et al., 2017).

Social relationships across different socio-economic backgrounds — i.e., of bridging type — have been found to significantly explain upward social mobility. In their twin articles, Chetty et al. (2022a) analyze Facebook friendship data for 72.2 million users to construct the measure of economic connectedness, a proxy of social capital made of ties that cross different socio-economic backgrounds. The measure tracks the prevalence of high socio-economic status friends with respect

to low socio-economic status friends among low socio-economic status individuals in the U.S. This measure predicts upward mobility more strongly than any other regional characteristic — including income inequality, segregation, or overall wealth. The article represents strong empirical evidence for the fact that social mobility (and therefore the overcoming of entrenched inequality) is determined by networks in which bridging social capital is key. Another important empirical evidence that the authors provide regards clustering, a measure of local network cohesiveness that implies most individuals connecting have their respective friends also being connected to each other.[8] While clustering remains uncorrelated with upward income mobility, it nevertheless strongly predicts non-economic outcomes such as life expectancy, obesity rates, volunteering, and social trust. Where clustering is higher — suggesting tighter friendship networks — outcomes in terms of health and social capital are more positive. This suggests that networks have very important effects on SEOs for a series of life dimensions. While bridging social connections are also likely to reshuffle economic outcomes, bonding ties may 'only' display positive effects in non-monetary life dimensions or for "getting by" for daily survival, at least for individuals belonging to more disadvantaged socio-economic strata.

In addition to the seminal work of Chetty et al. (2022a), many other authors have stressed the importance of social capital for SEOs. A large body of research shows that social relationships are a crucial pull factor to accessing the labor market. Montgomery (1991) and Calvó-Armengol and Jackson (2004, 2007) illustrate how job information travels through informal channels. Crucial is their stress on so-called weak ties, which emphasizes how infrequent, bridging connections that link disparate social clusters, tend to provide access to novel information and opportunities that remain otherwise unavailable within close-knit groups. At the individual level, empirical evidence shows that workers with more bridging connections secure higher-quality jobs and better wages compared to those embedded solely in dense, homogenous networks informed by strong ties (Granovetter, 1973) — or bonding social capital as previously outlined. Such bridging contacts activate several positive complementarities within the labor market, reducing an individual's unemployment spells (Bentolila et al., 2010), facilitating retention in a job and individual productivity (Castilla, 2005).

In a contrary fashion, but in line with parts of the evidence produced by Chetty et al. (2022b), other empirical evidence suggests that any connection — even those based on bonding — can generate effects on the labor market, e.g., by facilitating

[8]More precisely, their clustering measure is the local clustering coefficient averaged at the U.S. ZIPcode level. This does not require any cross-socioeconomic background ties but can for example reinforce links among poorer individuals.

first access to jobs to youngsters (Kramarz and Skans, 2014) and by promoting productivity within homogeneous teams —through peer effects and social alignment (Afridi et al., 2024). While any network may therefore produce selective opportunities for its members, a number of potential trade-offs is likely to counter-balance the group cohesion of a network structured along strong ties/bonding social capital, against the broader inclusiveness and diversity of society that necessarily requires bridging social capital to cross segregated networks.

In line with income/status homophily and with resource-based preferential attachment (see the next section), the benefits of networks are not equally distributed. Wealthier and more educated individuals will assume positions with greater centrality. Such network centrality confers disproportionate access to resources because central actors sit on more — and more diverse — paths through which information, favors, opportunities, or goods flow. In economic networks, those with high degree- or betweenness-centrality often act as hubs or brokers, capturing the lion's share of opportunities — higher wages, better credit terms, or first pick of innovations (Beaman, 2012; Goldstein and Udry, 2008; Haselmann et al., 2018; Marmaros and Sacerdote, 2002; Patel and Vella, 2013; Simon and Warner, 1992). Calvó-Armengol and Jackson (2004) model how central positions amplify individual payoffs by linking agents to more productive partners and reducing transaction costs.

Luo et al. (2017) corroborate this insight by showing that the influence of individuals within a network also reflects their socio-economic background. The authors show that the optimality of an individual's location in the network, which is measured by the collective influence (CI) metric (Morone and Makse, 2015), is highly correlated with the individual's economic status at the population level: the larger the CI, the higher the socioeconomic level. These results indicate that the location's optimality in the social network measured by the CI metric can accurately predict socioeconomic indicators at the personal level. Social network patterns of influence often mirror patterns of economic inequality. For example, the wealthiest individuals tend to have more diverse and active links, connecting remote locations and communicating with other affluent individuals. Poorer individuals, in contrast, have low contact diversity and are weakly connected to fewer hubs.

Networks therefore constantly reinforce and perpetuate existing socio-economic inequalities, unless specific policy-design deliberately fosters cross-status ties or subsidizes networking for marginalized groups, which could increase the probability for less-skilled or poorer agents to occupy more central network positions (Dobbie and Fryer Jr, 2015; Figlio et al., 2024). In that case, if poorer individuals assumed more central positions, inequality would significantly be reduced as

their return would be disproportionately greater (Calvó-Armengol and Jackson, 2004). In line with the tendency of networks to reproduce socio-economic inequalities, there is also a tendency for networks to reinforce horizontal divisions, e.g., through gendered patterns of networking. Lindenlaub and Prummer (2021) find that men's networks are larger and better suited for accessing information, while women's are denser but more limited in scope. This structural gap helps explain gender disparities in career advancement. Gneezy et al. (2003) find that women underperform in mixed-gender competitive settings despite equivalent skill, likely due to network-related psychological or structural disadvantages. Lalanne and Seabright (2022) show that network size positively correlates with executive pay, but that this effect is stronger for men — partly because own-gender ties are more effective and men have more of them, and partly because women are more likely to work in "female-friendly" firms that rely on more objective hiring methods and place less value on networks.

A multitude of networks coexist within the same societies. Networks that reinforce hierarchies, and extract value without reciprocity resemble O-groups — structures that entrench inequality. Conversely, P-groups are those more often relying on bridging social capital, that diffuse resources, encourage cross-cutting ties, and support mutual advancement.

The presence of O-groups – or "distributional coalitions" – implies that special interest groups have accumulated over time and increasingly lobby for redistributive or protectionist policies. Through their requests, O-groups introduce or exacerbate structural rigidities, inhibit innovation, and ultimately diminish economic dynamism. Their rent-seeking behavior distorts resource allocation, fosters regulatory capture, and contributes to long-term economic stagnation. Olson suggests that this phenomenon is especially pronounced in societies where political stability allows entrenched interests to operate with minimal resistance, thereby undermining both efficiency and adaptability in economic systems.

A denser presence of P-groups such as voluntary associations, such as sports clubs, cultural organizations, and non-profits has been found to associate with stronger institutional performance and better governance (Putnam, 1993a,b). Putnam's study on local governments in Italy provides evidence of a positive correlation between civic association density and regional economic growth. This relationship is explained by the capacity of horizontal civic networks to reduce transaction costs, enhance the quality of collective decision-making, and facilitate the provision of public goods. Putnam (2000) also documents the decline of social capital in the United States and links it to deteriorating economic and civic outcomes. He argues that declining interpersonal trust and civic engagement elevate trans-

action costs and diminish productivity, innovation, and entrepreneurship — thus weakening both local and national economic performance.

Empirical assessments of these competing theories have yielded mixed findings. Knack (2003), for example, tests the predictions of both Olson and Putnam using cross-country data on associational life, economic growth, and interpersonal trust. He finds limited support for Putnam's claim that the sheer number of civic associations is positively correlated with economic growth. Conversely, he uncovers some evidence in support of Olson's hypothesis: namely, that an increasing number of economically oriented or exclusionary interest groups may be negatively associated with growth. Similarly, Knack and Keefer (1997), through a cross-country empirical analysis, find that participation in voluntary networks and associations — often used as a proxy for social capital in the Putnamian framework — is not consistently correlated with economic growth. This challenges the assumption that association density alone adequately captures the productive aspects of social capital.

4.5.2 From Socio-Economic Outcomes to Networks

Socio-economic conditions can affect how citizens interact within society by shaping social networks. The first key mechanics through which this happens has to do with homophily. This dynamic is particularly pronounced when it comes to income and social status. As individuals are more likely to form ties with others who share a similar socioeconomic status, networks often become fragmented into segregated clusters (Currarini et al., 2009; Mayer and Puller, 2008; McPherson et al., 2001). This implies that socio-economic background should be rather similar among individuals belonging to the same network, implying positive assortativity.[9]

Another consolidated mechanism of social networks is resource-based preferential attachment (Jackson and Rogers, 2007): higher-income or better-educated actors attract more connections, reinforcing centralization around affluent nodes. This is a self-reinforcing pattern: individuals benefit from knowing well-connected people, who in turn seek out similarly connected others. As a result, resource-based preferential attachment and income/status homophily reinforce each other, producing systemic effects. Such a micro-level tendency also manifests at the societal

[9]Positive assortativity quantifies homophily by e.g. measuring to which degree the connections within a network are similar in terms of a specific trait, such as gender, class, etc. While positive assortativity recalls homophily, negative assortativity evokes complementarity as it characterizes networks in which dissimilar nodes form a tie.

level, showing that socio-economic inequalities have profound effects on the structure of networks that form within such context. Societies with greater wealth disparities exhibit more pronounced core–periphery networks, with marginalized groups remaining relegated to the periphery (Jackson, 2008). This is a natural consequence of resource-based preferential attachment: where disparities in terms of wealth and education are larger, network positions will also be more distant exacerbating the divide between the central core — where well-connected, resource-rich individuals concentrate — and the periphery, where less-connected and disadvantaged individuals remain isolated at the margins of the network.

Jackson (2014) shows that this can be explained due to complementarities that emerge from connecting to well-connected individuals. Benefitting from a well-connected friend can have important spillover effects on a series of life-dimensions, e.g., getting a job, selecting the right school for your children, etc. In this context, Ambrus and Elliott (2021), for example, demonstrate that income heterogeneity also leads to highly asymmetric network structures in risk-sharing environments: wealthier individuals can afford costly, cross-cutting ties, while the poor are confined to insular, redundant networks. Morello-Frosch and Lopez (2006) show that communities subjected to environmental and racial injustice often experience both material deprivation and social isolation, curtailing their access to bridging networks.

Education and educational disparities are also likely to play a major role for the network formation patterns of a society. Burt (2000) outlines how people with higher educational attainment tend to engage in more diverse and bridging ties, while lower-educated populations form denser, more homogenous clusters. Such patterns suggest that societies in which access to higher-level education is broad, may display social networks in which Putnam's "bridging" social capital is more present. Bridging social capital represents a countervailing force to income and status homophily as it tends, in fact, to "bridge" across different segregated network clusters. The resulting networks should therefore have less positive assortativity than networks that form in societies in which access to higher-level education is reduced. Education is therefore a key SEO for network formation.

An entire strand of literature has furthermore investigated how national wealth such as GDP per capita correlates with social capital formation (Bjørnskov, 2007; Knack and Keefer, 1997; Narayan and Pritchett, 1999). At the micro-level, the presence of sufficient resources to deal with domestic problem-solving is crucial as it frees up time for any engagement with external networks (Calvo et al., 2024). At the societal level, greater participation in networks outside of the nuclear family leads to greater social capital. Social capital affects levels of generalized trust,

overall network density and bridging networks that put civic engagement at their heart. Empirical findings in the Italian context highlight how social capital translates into practical advantages: in areas with higher social capital, households rely less on cash or informal loans, and access institutional credit more easily — especially where legal enforcement is weaker and among less-educated populations. Moreover, civic capital appears historically durable: Italian cities that gained municipal autonomy in the Middle Ages still exhibit higher levels of civic engagement today, a legacy likely transmitted via intergenerational self-efficacy (Guiso et al., 2004, 2016).

Generalized trust and overall network density as well as bridging social capital in general, facilitate the emergence of so-called high-diffusion networks, which are capable of rapidly spreading information and innovation. Any SEO facilitating bridging social capital can therefore be expected to promote high-diffusion networks. On the contrary, socio-economic conditions that privilege bonding social capital and therefore segregated network clusters will facilitate the emergence of low-diffusion networks. Examples are the already mentioned limits to access to education (Burt, 2000) but also the historical prevalence of contagious diseases (Fogli and Veldkamp, 2021). Low diffusion networks imply that communications and interactions do not cross boundaries of homophilic networks.

The mechanisms outlined so far suggest that SEOs are not merely background variables but active determinants of network structure and reach. When such conditions exacerbate inequalities, reduce access to high-quality education and multiple life-dimensions collapse into a "corrosive disadvantage" (Wolff and De-Shalit, 2007), the social capital formation is limited. In this case, network formation patterns tend to reproduce disparities (von Jacobi and Nicholls, 2024; La Ferrara, 2002; Sethi and Somanathan, 2004). The resulting network segregation further limits the emergence of bridging social capital and makes network formation across group lines improbable. Contrarily, where SEOs tend to be of an inclusive nature: promoting social cohesion, broad access to high-quality education and implying social mixing within schools, network formation patterns are likely to benefit from the formation of bridging social capital. Networks then assume a structure that crosses across different groups, overcomes segregation patterns, is characterized by less positive assortativity and a topology with less pronounced core-periphery divide.

We interpret these divergent trajectories in network formation patterns through the lens of O-groups and P-groups. Societies where wealth is widely shared tend to foster inclusive and egalitarian forms of networks in which bridging social capital plays an important role — what we refer to as P-groups. In contrast, contexts

marked by entrenched inequality, corrosive disadvantage and selective opportunity are more likely to result from bonding social capital and to produce O-groups: closed, hierarchical, and extractive networks that consolidate power and restrict mobility.

In line with some of the arguments presented so far, SEOs are likely to play a crucial role for the formation of O-groups and P-groups more specifically. Widespread prosperity might reduce the incentives for individuals to form groups, whether P-groups or O-groups, since individuals may already attain a satisfactory level of well-being without any need for collective action. At the other end of the spectrum, generalized poverty could likewise discourage group formation in general. We expect that, in such contexts, potential members of P-groups may be too poor or socially weak to provide goods for others to enjoy, while those inclined to form O-groups may lack the resources and influence to extract benefits from others who are themselves equally impoverished and powerless. As a result, both extreme affluence and extreme poverty may undermine the incentives and capacity for forming networks that pursue collective action.

4.6 Informal Institutions – Socio-Economic Outcomes

We next review the key literature on informal institutions, understood as socially enforced norms and rules operating independently of formal state authority, and their impact on SEOs, including income distribution, investment, productivity, social trust, labor market participation, and inequality. At the same time, such SEOs can shape the development, diffusion and persistence of informal norms, meaning that this relationship is intrinsically bidirectional. As for Section 4.3 and 4.5, the wording of "outcomes" should not prevent an understanding of socio-economic factors as also influencing informal institutions.

It is worth noting that this linkage is evidently endogenous to the others of the conceptual system already treated. The quantity, content, and relevance of informal institutions is tightly connected to cumulative historical processes in which rule of law has or has not fully consolidated.

4.6.1 From Informal Institutions to Socio-Economic Outcomes

A large body of theoretical and empirical work highlights the causal role that informal institutions play in shaping SEOs. These institutions operate by fostering trust, facilitating cooperation, and lowering the frictions typically associated with

economic exchange. Yet, they also consolidate practices that can be discriminatory or tolerating systematic wrongdoing. Their influence is especially pronounced in contexts where formal institutions are weak.

One of the earliest and most influential studies in this field is Milgrom et al.'s (1990) examination of the Law Merchant in medieval Europe. Their research shows that long-distance trade was made possible not by centralized state enforcement but by informal mechanisms such as private judges and merchant associations. These arrangements minimized transaction costs and created reputational systems that incentivized honest behavior, thus enabling market expansion even in stateless societies. This example highlights how informal mechanisms can directly affect economic outcomes by reducing transaction costs, e.g., solving problems of information asymmetry and of contract enforcement. More broadly, the shift from local exchange to long-distance trade, with the resulting increase in uncertainty and transaction costs, was made possible thanks to the development of informal rules, taking the form of voluntary, semi-coercive bodies enforcing ostracism on merchants who did not live up to agreement (Greif, 1994; Milgrom et al., 1990; North, 2012). The further expansion of markets led to the need to introduce specialized roles and organizations, which took the form of formal institutions (North, 2012). However, as noted in Section 4.4.2, even today, complex commercial transactions are governed, at least in part, by informal agreements and relational contracts.

Greif (1993) offers a further historical case of the Maghribi traders in the 11th century. Operating without formal legal systems, these merchants relied on reputation-based enforcement mechanisms embedded in kinship networks and communal sanctions. The "Maghribi Traders' Coalition" illustrates how informal institutions enabled complex economic transactions across vast geographical areas. These practices were self-enforcing and contributed to a flourishing Mediterranean trade economy.

North (1991) extends this idea by arguing that institutions — both formal and informal — constitute the "rules of the game" in economic and political life. Informal institutions, in particular, reduce uncertainty by providing a stable structure for human interaction. Their influence on transaction costs is direct and substantial: societies with well-established informal norms that support honesty, cooperation, and long-term relationships tend to experience higher levels of investment and productivity. Similarly, Pejovich (1999) underscores the importance of alignment between formal and informal institutions. He argues that development is most successful when informal norms reinforce formal rules. Misalignment, by contrast, can result in institutional inefficiencies and hinder development. For

example, the mere introduction of property rights laws may not lead to investment if prevailing norms discourage individual ownership or do not recognize the authority of the state.

Aoki (2001) also explores the interface between formal and informal institutions, albeit more implicitly. Using game-theoretic models, Aoki illustrates how deeply embedded social conventions influence economic behavior and how institutional change is shaped by shared understandings and adaptive expectations. His framework underscores the role of informal institutions in explaining the emergence of multiple equilibria and the persistence of suboptimal equilibria characterized by inequality, underdevelopment, or even institutional failure. Overall, the effect of formal institutions on economic outcomes is mediated by their degree of complementarity and compatibility with informal institutions, with economic progress being favored by formal institutions mapping onto informal ones (Boettke et al., 2008:332; Williamson, 2009). On the contrary, a clash between formal and informal institutions typically results in reduced economic performance (Pejovich, 1999), through, for example, an enlarged shadow economy (Gërxhani and Cichocki, 2023), persistence of gender-based discrimination (Bursztyn et al., 2020) or acceptance of corruption (Kubbe et al., 2024). In other terms, through so-called lock-in effects between specific informal and formal institutions, the former contributes to the formation of specific equilibria in which certain types of conventions, rules, and economic performance reinforce each other (Belloc and Bowles, 2013). To the extent that such lock-in effects are specific and tight, informal institutions can contribute to a stasis in socio-economic progress, on the one hand by creating an environment populated by second-order beliefs that inhibit innovative or disruptive behavior, on the other hand by making investments in policy or legal design appear futile when informal institutions dominate the equilibrium (Amendolagine and von Jacobi, 2023).

Axelrod (1986) offers a complementary perspective through his work on the emergence of norms. By simulating repeated interactions among individuals, he demonstrates how informal norms of cooperation can evolve even in the absence of formal authority. These norms regulate conflict and promote prosocial behavior, making them foundational to broader socio-economic domains such as education, healthcare, and taxation. Axelrod also suggests that such norms can form the basis for future formal institutional development.

A more explicit causal investigation is provided by Williamson (2009), who uses cross-country empirical data to argue that informal institutions, more than formal ones, determine economic performance. She finds that unwritten rules and social norms not only complement formal regulations but can also significantly override

them when inconsistencies arise. Her analysis reveals that countries with informal institutions that support formal legal structures tend to perform better economically. Williamson concludes that development strategies focused solely on formal institutional reform are insufficient without an understanding of the underlying informal landscape. Acemoglu and Robinson (2006) reinforce this view by arguing that institutional quality, including the informal institutions that govern behavior, is the fundamental determinant of economic development. They show that weak or extractive institutions, those that fail to constrain elites or secure property rights, result in poor economic outcomes. Their theory provides a structural explanation for persistent income differences across countries.

Building on this, Acemoglu and Jackson (2017) introduce a model that incorporates social norms into the analysis of law enforcement. They demonstrate that the effectiveness of formal rules depends heavily on their congruence with prevailing informal norms. When laws are at odds with social expectations, they may be widely ignored, weakening compliance. Conversely, when formal laws evolve in step with informal norms, they can gradually shift behavior and enhance rule-following. This model captures the complex interplay between the informal and the formal in shaping socio-economic outcomes.

Informal institutions and shared values are often encompassed within the concept of social capital. Social capital has been widely documented as one key determinant of economic growth (Banfield, 1958; Beugelsdijk et al., 2004; Knack and Keefer, 1997; Putnam, 1993a,b; Serageldin and Grootaert, 2000; Zak and Knack, 2001) and resilience (Prodi et al., 2023), though its impact may vary substantially depending on the type – e.g., bridging vs. bonding – of social capital and on the context (Xue et al., 2024). In addition to its impact on growth, social capital can also have positive effects on wellbeing and life satisfaction (Bjørnskov, 2003; Chetty et al., 2022a), innovation (Tsai and Ghoshal, 1998), labor productivity (Ganau and Rodríguez-Pose, 2023), and income inequality (Bolaños Pérez and Saucedo-Acosta, 2022). Social capital is not quite equivalent to informal institutions, but it correlates densely with many informal institutions and – contributing to trust – can reinforce their effectiveness (Amendolagine and von Jacobi, 2023; Voigt, 2018).

The mere presence and salience of informal institutions already largely affects SEOs (Williamson, 2009). However, such role cannot be treated in isolation to the relationship that informal institutions maintain with formal institutions and – inherently – with rule of law. Informal institutions affect SEOs because they may transversally undermine the legitimacy of the law or compromise an efficient enforcement of the latter (Acemoglu and Jackson, 2017; Marè et al., 2020; Tabellini,

2008, 2010).

Whenever informal institutions contribute to a discrepancy between *de jure* and *de facto* applications of the law, SEOs may automatically result from such discrepancy. To the extent that the law is not fully credible (*de jure* – *de facto* gap), more activity and transactions may occur outside of the legal realm, or the informal economy, providing fertile terrain for power abuses, inequality, and discrimination.

4.6.2 From Socio-Economic Outcomes to Informal Institutions

The empirical literature provides growing and compelling evidence that various SEOs do not merely result from informal institutions but actively contribute to their evolution and transformation. In particular, economic inequalities – especially disparities in wealth distribution – play a pivotal role in shaping informal norms such as social trust, reciprocity, and reputation mechanisms. Alesina and La Ferrara (2002) offer a review of the literature on this theme and empirically demonstrate that higher income inequality is associated with significantly lower levels of interpersonal trust, particularly among individuals who perceive themselves as being economically disadvantaged or marginalized. Their findings suggest that inequality erodes the social fabric necessary for cohesive and resilient communities, making informal cooperation more fragile and selective.

At a more granular level, Xiao and Bicchieri (2010) show through behavioral experiments that wealth differences distort norms of reciprocity. Their study highlights that individuals are more inclined to reward or reciprocate acts of generosity from wealthier individuals than from poorer ones. This asymmetry arises because individuals tend to place greater value on absolute, rather than relative, returns. Therefore, individuals who begin with higher endowments are more likely to be perceived as generous and trustworthy, thus accruing social and reputational benefits that further reinforce their economic advantage. Over time, this dynamic can entrench inequality and undermine the egalitarian assumptions on which many informal norms are predicated.

Bicchieri (2010) deepens the understanding of this process by exploring the cognitive foundations of reputation formation. She argues that social heuristics and cognitive biases frequently lead individuals to evaluate others' behavior based on status cues, such as wealth, rather than on objective assessments of fairness or intent. This implies that even well-established informal institutions are vulnerable to being co-opted by prevailing economic hierarchies, leading to a reinforcement

of privilege and exclusion rather than reciprocity and cooperation.

More broadly, Acemoglu and Robinson (2006) theorize the existence of a vicious cycle between socio-economic inequality and institutional degeneration. In their framework, high inequality enables elites to capture not only formal political and legal institutions but also to reshape informal institutions — such as societal norms and beliefs — in ways that justify and perpetuate their dominance. These altered informal rules, in turn, reduce the capacity of the majority to organize collective action, erode generalized trust, and dampen expectations of fairness, thus closing off avenues for institutional reform. The result is a self-reinforcing equilibrium in which inequality produces weak institutions, and weak institutions further entrench inequality.

Together, these studies underscore the dynamic, bidirectional relationship between SEOs and informal institutions. Rather than acting as passive constraints or facilitators, informal norms are themselves endogenous to economic structures. This recognition invites a more nuanced view of institutional development, where the distributional consequences of economic policies and outcomes must be considered not only for their immediate effects, but also for their long-term impact on the social norms that sustain cooperative behavior and institutional stability.

Since informal institutions are at least partially evolutionary outcomes of a given geographical context (Haidt, 2012; Oyserman, 2017), SEOs and informal institutions are likely to share a set of common determinants, e.g., of geographical factors (Barry et al., 1959; Buonanno and Vanin, 2017; Voigt, 2024). Furthermore, historically more inclusive political processes, which contribute to more equal societies, also tend to affect the influence of informal institutions: greater inclusiveness and participation in the formation of formal institutional content reduces the salience and "grip" of informal institutions on society (Amendolagine and von Jacobi, 2023; Boranbay and Guerriero, 2019). The link between SEOs and informal institutions once again reveals itself as an endogenously driven relationship in which a series of other determining factors are shared.

5 Discussion

The investigation of linkages within our conceptual system (Figure 1) has highlighted that causal mechanisms are likely to be bidirectional and recursive. Furthermore, causality is likely to unfold along a causal chain in which different links are contemporaneously active. Endogeneity is therefore a natural phenomenon

within investigations that centre on the rule of law and societal dynamics. It also shows that multiple layers of analysis may be necessary to achieve greater insight into the determinants of rule of law backsliding or its strengthening. Which networks are active in promoting or undermining rule of law? Are they in competition with each other? How do such networks map against diversity in values and social norms across them? Is there an overlaying of multiple discriminatory patterns that make it easier to exclude a part of the population from equal treatment?

The review of the literature suggests that P-groups in society may contribute to a strengthening of rule of law, mainly by enacting bridging social ties that cross otherwise segregated groups, and by endorsing universalist values that provide deep grounding to demands for impartiality. Contrarily, O-groups may constantly form in pursuit of private interests, seeking to reinforce bonding ties that eventually exclude other citizens not akin to the membership-base.

We departed from the hypothesis that O-groups risk undermining the rule of law. Yet, they could sometimes, intentionally or unintentionally, favor its emergence. When competition among O-groups occurs, in theory one might expect that this will result in the emergence of rule of law (North et al., 2009; Robinson and Acemoglu, 2012; Weingast, 1997): to defend their interests, the incumbent groups may accept constraints on power in order to prevent it from falling into the hands of new entrants. Thus, although they do so with extractive intentions – meaning they still seek to obtain the largest slice of the pie – competing O-groups might (un)intentionally favor the strengthening of rule of law. However, recent empirical investigation of different configurations of competing networks does not confirm this hypothesis (Mazepus et al., 2020).

Given our departing hypothesis, it is important to note that a clear distinction of which features make up an O- versus a P-group is not evident. In some branches of the literature, it is the distributional intention that could serve as distinguishing criterium: O-groups seek private gain, whereas P-groups defend rights and benefits that transcend membership boundaries and therefore bear the seed of empowerment for a broader segment of society. Departing from such distinction allows investigating what kind of topologies O- and P-groups adopt. Contrarily, O- and P-groups could *ex ante* be defined in terms of their network topology, in which case the distributional intention of the groups could become the object of empirical investigation.

Based on such considerations, and the literature reviewed so far, we suggest that O-groups and P-groups are fluid concepts that unfold along a continuum. At the outmost edges of such continuum pure O-groups and P-groups may be found.

Yet, in its middle there are many hybrid versions of groups that combine elements of P-groups and O-groups in their goal setting, membership policies and daily activities. Empirical investgations that enforce a hard-line dichotomic distinction between O-groups and P-groups may be misleading.

6 Conclusion

This document has situated the investigation of 'networks and rule of law' within a broader conceptual system, in which networks, rule of law, and informal institutions interact to jointly shape socio-economic outcomes. The conceptual framework emphasizes that the benefits associated with rule of law are the result of the interaction between multiple societal layers and institutional elements. The proposed perspective highlights the pivotal role that individuals and their interactions play in either sustaining or undermining the rule of law. Through the formation of networks, engagement in collective action – whether as P-groups or O-groups – and the internalization and transmission of shared norms and values, people shape the societal landscape in which institutions operate. These social interactions contribute to the emergence and persistence of informal institutions, which, in turn, shape individual behavior and collective expectations. Moreover, informal institutions influence whether and how *de jure* norms are translated into *de facto* practices.

By combining fragmented literature on the topic, this paper advocates for a holistic view of society when examining processes of rule of law consolidation or deterioration. The rule of law is not crafted in isolation by technocratic elites; rather, it emerges from the dynamic interplay between institutional structures including informal institutions, the distribution and mobilization of power through networks, and the prevailing degree of civic engagement and associational life. Prevailing socio-economic conditions like inequality also play a major role in activating or hindering these mechanisms. In this sense, the functioning of legislative, executive, and judicial branches is deeply embedded in the broader socio-institutional and economic context.

Rule of law should therefore be understood as a multi-dimensional phenomenon, which cannot be adequately captured through a single metric or linear index. Instead, it consists of interrelated components operating at both horizontal and vertical levels of society, each requiring nuanced observation and contextual interpretation. This complexity calls for a systems-oriented analytical approach, where

specific dimensions of rule of law are connected to each other, and further to the broader societal processes that co-evolve with institutional development – see Figure 1. Acknowledging the embeddedness of rule of law in everyday interactions and social structures is essential to understanding its resilience or vulnerability across different contexts.

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