

Toward a Theory of Entrepreneurship and Institutional Uncertainty

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Abstract:

Uncertainty and institutions are vital concepts in entrepreneurship research. However, to date little work has been done to combine them into a consistent conceptual framework for analyzing institutional uncertainty and the effects of such uncertainty on entrepreneurial action. Using insights from new institutional economics, we develop a model that depicts the institutional uncertainty resulting from conflicts between different “levels” of social activity. We further explain how entrepreneurs mitigate this uncertainty through market and institutional action. Finally, we focus on special cases of institutional uncertainty such as “regime uncertainty,” wherein entrepreneurs are left without reliable means to overcome uncertainty in political institutions.

JEL Codes: D81, L26,

Key words: entrepreneurship, uncertainty, institutions, judgment, regime uncertainty

1. Introduction

Entrepreneurship is flourishing as a discipline, and there is every reason to believe it will continue to “party on” in the future (Shepherd, 2015). However, despite rapid growth in entrepreneurship research, many central concepts remain under-theorized and under-applied. This is especially true of *uncertainty*: although its importance for entrepreneurs was recognized over two and a half centuries ago (Cantillon, 2001 [1755]; Say, 1971), the exact role it plays in entrepreneurial decision-making is still debated (McMullen and Shepherd, 2006). The reason for the continuing controversy is that, although uncertainty is frequently mentioned in entrepreneurship studies, there is a paucity of data on its nature, types, and time horizons (Bloom, 2014). This in turn means that uncertainty research—despite having made important strides in the past—has a long way to go before resolving some of its most crucial problems. One such pertains to the vital question of how uncertainty affects the institutional environment in which entrepreneurs act.

Whether social, political, or economic, institutions profoundly affect the entrepreneurial process. Exactly how this happens, however, is not so easily explained, and there is relatively little research on the “institutional conditions that facilitate or hinder entrepreneurial engagement” (Dorado and Ventresca, 2013), especially in regard to uncertainty. In particular, entrepreneurship theory lacks a systematic explanation of how uncertain institutional arrangements affect entrepreneurial decision-making. For example, it is widely held that entrepreneurship can contribute greatly to economic growth and therefore to the well-being of society (e.g., Schumpeter, 1934). For this to be the case, however, society’s institutional framework must be conducive to *productive* entrepreneurship. Indeed, it has been shown that the variance in institutional arrangements influences both the rate and type of entrepreneurial activity (Stenholm, Acs & Wuebker, 2013). Without proper supporting institutions, entrepreneurship can be unproductive or even destructive, thereby impairing economic performance and growth (Baumol, 1990). The

impact of entrepreneurship is therefore more ambiguous than is sometimes thought, as its rate and effects are a function of the quality of institutions (Douhan & Henrekson, 2010).

However, the relationship between institutions and entrepreneurship is not unidirectional, and consists of more than the choice between productive, unproductive, and destructive activity. Entrepreneurship can also be directed specifically toward the institutional setting and toward changing the “rules of the game” (Schepssle, 1989; Powell and DiMaggio, 1991). Entrepreneurial actions can take at least three basic forms with respect to any specific institution. Common entrepreneurship *abides* by the rules comprising the institutional framework. Yet where an institution is deemed by entrepreneurs to be unjust or unbeneficial, they can also choose to act in order to *alter* it by engaging in institutional entrepreneurship, or to attempt to *evade* its effects (Henrekson & Sanandaji, 2011). In fact, all entrepreneurship is relevant for the institutional framework: abiding action reinforces institutions and their aims, evading action challenges their perceived effectiveness by circumventing them, and altering action aims to change or replace them by political action. Entrepreneurial action and institutions thus interact and may even mutually constitute each other.

We argue, however, that current work presents an incomplete picture of the relationship between entrepreneurship and institutions by overlooking the importance of uncertainty. To explain this relationship, we apply Oliver Williamson’s (1998, 2000) conceptualization of different institutional levels of economizing to distinguish the effects of uncertainty between different kinds of institutions. We show how uncertainty is created when different institutional levels are misaligned. The introduction of institutional uncertainty decreases entrepreneurs’ ability to bear uncertainty in their normal activities, along with their ability to generate feedback to higher level institutions, leaving them with little choice but to either evade those institutions or engage with

them at a different institutional level. We further argue that market entrepreneurship requires alignment across institutional levels to reduce troublesome institutional uncertainty.

The paper is outlined as follows: in section 2, we describe the institutional environment in which entrepreneurs act using Williamson's levels of institutional economizing. We further explain why entrepreneurship is limited to only some of these levels. In section 3, we develop the analysis by showing how "misalignment" between the different institutional levels creates institutional uncertainty. Section 4 explains how entrepreneurs are sometimes able to cope with this uncertainty using a combination of good judgment and institutional entrepreneurship, depending on the level at which uncertainty appears. There are, however, cases in which entrepreneurs are unable to overcome the barriers imposed by institutional uncertainty. We elaborate on this claim in section 5, where we apply our framework to the case of "regime uncertainty" as faced by entrepreneurs during the Great Depression and Great Recession. We conclude with a discussion in section 6 of future research directions for the study of institutional uncertainty, and summarize our key findings in section 7.

2. The Institutional Context of Entrepreneurial Action

Entrepreneurship, usually defined as the exploitation of opportunities for profit (Shane and Venkataraman, 2000; Shane, 2003), takes place in a market regulated and shaped by the institutional framework. As such, entrepreneurship happens under and is facilitated by shared mental models or institutions (North, 1990), defined as "humanly devised constraints that shape human interaction" (North, 1990: 3). While many institutions are formal political rules that demarcate legal action and responsibility, others, like cultural values, beliefs, and ideology broadly, as well as organizational forms and modes of exchange, are not. One effective way to categorize

and group these constraints is to consider them as occurring in different *institutional levels of economizing*, as identified by Oliver Williamson (1998, 2000). Williamson's framework was not originally developed to study entrepreneurship, but it can nevertheless be used to understand the institutional conditions of entrepreneurial action. Williamson's "levels" thereby provide a basis for a deeper understanding of entrepreneurship in the market, and offer valuable insights into the functioning of, and preconditions for, successful entrepreneurial action. They also offer a foundation for understanding the dynamics of institutional change and uncertainty.

The entrepreneur, and thus also *entrepreneurial action*, is embedded in—and therefore occurs within the limits of—the market's existing structure, which includes its formal and informal institutions and its achieved allocations of resources (Granovetter, 1985). Entrepreneurs therefore tend to take the current state of the market as fact and starting point, and plan their behavior in accord with the perceived best way to achieve their ends, the outcome of which may generate profit (Knight, 1985 [1921], Mises, 1949). The market's structure and institutions constitute the framework within which entrepreneurs accomplish planned resource reallocations or reconfigurations under uncertainty (Klein, 2008). Indeed, entrepreneurship is to some extent determined by society's institutions, especially in terms of where entrepreneurs focus their efforts (Baumol and Strom, 2007; Williams and Vorley, 2015). Institutions therefore affect the existence of entrepreneurship as well as the type or nature of society's effectuated resource allocation: productive, unproductive, or even destructive (Baumol, 1990).

The relationship is bidirectional, however. Entrepreneurship can also affect the structure and functioning of the institutional framework, an influence that has been termed "institutional entrepreneurship" (Douhan and Henrekson, 2010; Henrekson and Sanandaji, 2011). Because most entrepreneurial actions abide by the "rules of the game" established by institutions, these

actions legitimize and reinforce those rules and thereby engender path dependency. In fact, the greater the fraction of entrepreneurial actions that abide by the institutional framework, the greater its influence on future actions (as it raises the perceived cost of not abiding) and the smaller the chance that these rules can be changed (as the cost of changing legitimate rules is high) (Henrekson and Sanandaji, 2011).

Institutional change can also be brought about through entrepreneurial action taken with the explicit aim of altering the existing institutional framework in some specific way. While this can take the form of unproductive and destructive rent-seeking (DiLorenzo, 1988), there are also opportunities for productive entrepreneurship in which entrepreneurs engage in political action to improve on or replace ineffective or harmful legislation (Henrekson and Sanandaji, 2012: xvii-xviii). Entrepreneurs of similar sentiment who believe certain institutions to be exceedingly inhibitive for profitable innovations, but who do not choose to directly engage in political action, can act to evade existing frameworks. For instance, they may consider new or alternative means of organizing, new forms of contract, or choose to locate in a different country (North, 1995).

The institutional environment is thus closely related to the quality of entrepreneurship in society, but importantly, is also a determinant of its quantity. It is clear, for instance, that government intervention can reduce the amount of entrepreneurial action in society (Djankov et al., 2002). Conventional approaches to this problem tend to focus on regulatory barriers, taxes, labor regulations, and similar policies, and on the negative incentive effects each has on profit-seeking entrepreneurship (Kirzner, 1985; Djankov et al., 2002, Baumol et al., 2007, Henrekson and Stenkula, 2010, McCaffrey, 2015). In extreme cases, such as in socialist economies, it can even be said that the scope of government action becomes so great that entrepreneurship disappears altogether (Salerno, 1990; Machaj, 2007).

The above considerations provide a basis for studying the effects of institutions on entrepreneurship. In particular, they provide the background for our discussion of how entrepreneurship can be seriously hampered if uncertainty is introduced into the rules of the resource-allocation game. To further clarify this point, we now turn to the typology of institutions advanced by Williamson (1998; 2000).

Figure 1 about here

The Williamsonian framework explains how social processes can be modeled using several orders of economizing on four distinct institutional levels (Fig 1). On the lowest level, L4, resource allocation is carried out through trade in the market. This “third order” economizing is performed via the price mechanism and market actors’ bidding for resources. Through this continuous process of market price determination the marginal conditions are aligned and resources are put to their most valuable uses. In the second order, level L3, governance structures are created to economize on frictional costs in the market that impede the price mechanism’s ability to bring about an efficient allocation of resources (cf. Coase, 1937, 1960, Williamson, 1975, 1996). This level primarily includes longer-term market relationships such as relational contracts and organizations. Entrepreneurs use these measures to control and allocate resources over time, thereby increasing chances of profit in the face of costly market action. Williamson’s first order of economizing, level L2, constitutes the formal institutional framework that shapes the “rules of the game” and how the economy functions (cf. North, 1990; Williamson, 1985). The institutional purpose of this level is primarily to define and secure property rights through the polity, judiciary, and bureaucracy of government. Finally, the over-arching level L1 embeds the aforementioned institutional levels in an even broader setting of cultural values and traditional norms. The

three institutional levels below L1 are, in Williamson's terms, economizing levels, and thus include the aim of minimizing costs with respect to the social values in L1.

Entrepreneurs choose the level of economizing that fits best for the attainment of their ends, considering the costs involved. As Williamson notes, however, the difficulty of effectuating change, as well as the frequency of real changes, increases with the levels. While L4 constitutes continuous change to reflect consumers' changing preferences through trade and fluctuating prices, organizations and contracts in L3 change less frequently and at greater cost (every 1-10 years, according to Williamson's heuristic). Likewise, L2 is limited to changes every 10-100 years, which are therefore rare and "very difficult to orchestrate" (Williamson, 2000: 598). This problem applies even more to changes in norms and values on L1, which represents a time horizon beyond that of most human beings, and even of long-standing organizations. Whereas changes to L2-L4 can be brought about through direct action, the social embeddedness level L1 "is taken as given by most institutional economists" (Williamson, 2000: 596) because it generally falls under sociology's study of cultures, norms, and structural biases. Yet even in sociology, it "remains in need of greater theoretical specification" (Smelser and Swedberg, 1994: 18).

Entrepreneurial action and market organization fit mainly in the everyday trading and resource allocation of L4, and, through governance choice, the economizing efforts of L3 (Williamson, 1975, 1985). While there is a political aspect to governance choice through legal mandates, rights, and limitations, and formal rules and regulations, hierarchical governance structures intended for legitimate business are commonly exempted from contract law regulating market contracts through forbearance (Williamson, 1991). Furthermore, specific theories of entrepreneurship are more relevant at specific levels. For example, Kirzner's (1973) alert arbitrageur-entrepreneur appears mainly in L4, where price discrepancies are more apparent. At the

same time, Schumpeter's (1934) innovative entrepreneur introduces "new combinations" through starting new firms, and therefore acts more in L3. Knight's (1921) judgmental entrepreneur, on the other hand, acts in L4 by allocating resources (Casson, 1982: 23), in L3 by organizing firms (Foss and Klein, 2012), and in L2 by organizing public affairs (Klein *et al.* 2010). In these theories and in many others, market entrepreneurship generally involves profit-seeking within the lower two levels. Consequently, market entrepreneurship does not typically involve the higher levels L1 and L2. Even when acting in large-scale "entrepreneurial groups" or strategic alliances, for instance, entrepreneurs are not generally capable of quickly changing either deep-seated social traditions or fundamental informal rules in society. Instead, market entrepreneurship happens in L3 and L4, through atomistic trade and the formation, change, and dissolution of governance structures and organizations. However, although the bulk of "conventional" entrepreneurship occurs in L3 and L4, this does not imply that entrepreneurs never act in L2. In fact, as we argue in this paper, institutional uncertainty can prevent action in L3 and L4 and consequently encourage entrepreneurs to shift their efforts to L2. Entrepreneurial actions in L3 and L4 can produce changes in L2, primarily through adopting evading strategies. Entrepreneurs can also enter L2 to produce institutional change that is productive (e.g. removing or improving harmful regulation), unproductive (e.g. redistributing income through legal means), or destructive (e.g. creation of privilege or regulation that hinders or excludes competitors). We argue, however, that entrepreneurs cannot directly act to effectuate change on level L1, which, as suggested by Williamson (2000), does not entail economizing but rather is "non-calculative" and "spontaneous," and therefore lies outside the scope of economic action.

3. Institutional Alignment, Change, and Uncertainty

Williamson's framework offers researchers a more nuanced understanding of the role institutions play in entrepreneurial theory and history. For instance, it provides a novel way to conceptualize how entrepreneurs act within existing institutional frameworks as well as how they can radically alter them. Entrepreneurship takes place on several different institutional levels, and the hierarchy and relative alignment of these levels both influence entrepreneurial action and are influenced by it.

Williamson's institutional levels suggest a dynamic to institutional entrepreneurship—and entrepreneurial action in general—by specifying the nature of cross-level interconnectedness. The levels are not arbitrary, but represent a hierarchy based on the speed by which institutions change and the boundary conditions each level places on “lower” levels. Williamson (2000: 596) notes that “the higher level imposes constraints on the level immediately below” (represented by solid arrows in Fig 1), while feedback moves in the opposite direction (dashed arrows). In general, following Williamson's model, major changes in society happen in L1 as values and norms change, for example as a result of war, economic crisis, or adoption of a new official state religion. However, these occur only with “a great deal of inertia” (2000: 597), which in turn has repercussions on the legal and regulatory apparatus (L2), which sets limits and establishes the rules in which economic organizing (L3) and exchanges (L4) can lawfully be carried out.

What is missing in Williamson's model is a logic for analyzing the impact of time, change, and uncertainty among the different institutional levels. These three concepts are closely related: the passage of time allows for future changes in the data, which are uncertain for entrepreneurs acting in the present. The entrepreneurship literature so far has focused mainly on uncertainty in the context of the market, that is, within L3 and L4. In fact, *within* each level lie

unique uncertainties: L4 contains the “ordinary” uncertainty of the market relating to prices and resource allocations, L3 the uncertainties of innovative governance and firm structures, L2 political uncertainty associated with rules and policy changes, and L1 overarching uncertainties regarding social values, cultural norms and behavior, and trends in the distant future.

However, because of the interconnectedness of the institutional levels, and the related constraints and feedback mechanisms, uncertainty *between* levels can also pose unique problems for entrepreneurs. For example, how does uncertainty in L2 affect the action of entrepreneurs in L3 and L4 who rely on L2 to establish stable rules of the game? We can answer such questions by considering the “alignment” between institutional levels. Williamson’s framework assumes full institutional alignment, or what Douhan and Henrekson (2010) refer to as “institutional equilibrium,” in which there is an absence of change in institutions. Full alignment suggests an optimal situation where social costs are minimized because there are no frictions arising due to mismatches between different levels of institutions. When institutional levels are aligned, actions on any level comply with the boundary conditions established by “higher” levels while also constraining actions on “lower” levels. In other words, there are no governance innovations on L3 that disrupt the formal rules established and enforced on level L2, just as there is no misalignment between L1 and L2 or between L3 and L4. This equilibrium situation is depicted in Figure 2, with each institutional level represented by an arc that constrains the movement (deviation) of lower levels. We argue, however, that institutional change happens in different levels at different times, and consequently that institutional levels are not always aligned. This misalignment creates uncertainty for entrepreneurs.

Figure 2 about here

Williamson's model can be usefully interpreted in terms of costs, where the constraints placed by one institutional level on lower levels effectively reduce costs through standardizing behavior and promoting convergence in expectations. Thus the customs, norms, and values in a society (level L1) facilitate the implementation and enforcement of certain formal rules in L2 that in turn facilitate cost-effective governance mechanisms (L3) to produce more valuable resource allocations in L4. At the same time, these constraints also raise the relative cost of challenging actions, making behaviors that disturb the status quo, such as entrepreneurs' evading and altering actions, less likely—but not impossible. The constraints of higher institutional levels impose “standards” on lower levels much in the sense used in technology: it may be possible for firms to move beyond established standards such as USB ports for “plug and play” peripherals—and it may be technologically and economically preferable to do so—but incompatibility comes with a cost. Consequently, we should expect to see actions incompatible with established standards only where they are judged to be valuable enough to overcome this cost while still promising profitability exceeding that of entrepreneurial action that abides by institutional constraints. Typically, entrepreneurs and business activity in general thrive best under conditions of institutional *alignment*, when institutional constraints, entrepreneurial behavior, and feedback mechanisms are each in sync. When this alignment is disturbed, the institutions entrepreneurs rely on are thrown into doubt, and new uncertainties appear. In fact, the difficulty involved in disrupting institutional alignment exacerbates the effects of this change, because it alters an institutional equilibrium in which it is easy for entrepreneurs to form stable expectations about institutional quality, changes, and trends.

Our analysis suggests that entrepreneurs act on the institutional level that appears least costly to them and therefore choose action in L2 for the same reason they might choose to shift

their efforts from L4 to L3: the costs of institutional uncertainty. Shifting actions to a higher institutional level is indicative of institutional *misalignment*, which increases the cost of uncertainty on the lower level while decreasing the relative cost of higher-level action. There are many possible sources of institutional misalignment, some of which directly involve institutional entrepreneurship: just as they disrupt existing economic orders, innovative entrepreneurs can also disrupt the institutional status quo and thus push one institutional level out of alignment with the others. This creates a new kind of uncertainty for entrepreneurs in “downstream” institutions who suddenly find themselves adrift from the constraints of “upstream” institutions and consequently without reliable channels for providing feedback.

Innovations that disrupt production methods typically have institutional consequences, as they change relative prices and therefore resource allocations and introduce new types of governance structures to organize innovative production (Schumpeter, 1934, p. 66; Bylund, 2016). For instance, consider the effects of the so-called sharing economy, where innovative actors like Uber and Airbnb challenge and ultimately disrupt market production of personal transportation (taxi) and lodging (hotel) services. Uber’s ride-share services challenge existing governance structures by competing with traditionally-organized cab companies using a different organizational model (L3) with customer-centric service and pricing (L4). Yet they also pose a challenge to the formal rules of the game (L2). By contracting with their drivers as subcontractors rather than employees they evade stifling labor market regulations. The scope of these regulatory constraints is now uncertain because they were originally designed to deal with rather different kinds of organizations that operated using older technologies. As a result, labor regulations may have to change dramatically in response to new production methods. In the case of Airbnb, their home-sharing services compete directly with hotels and motels by introducing lodging resources

to the market that were previously unavailable. This changes both prices and availability (L4), but also challenges housing association by-laws and landlord policies (L3). It may even affect zoning laws and tax codes (L2), previously reliable institutions that are now also uncertain due to technological change.

For both Uber and Airbnb, it is unclear what constraints existing institutions (e.g. business regulations) place on innovative organizations, and it is likewise difficult for entrepreneurs to directly feedback to outdated institutions. Misaligned institutions therefore put entrepreneurs in a precarious position: their actions in L3 and L4 become difficult or impossible, not due to conventional uncertainties of the market, but to uncertainty caused by a lack of adjustment in higher-level institutions, which change more slowly. More importantly, the kinds of entrepreneurial action used in L3 and L4 are different from the institutional entrepreneurship required to change L2. This means that entrepreneurs who specialize in L3 and L4 will bear a higher cost of adjusting their behavior to eliminate uncertainty by acting in L2 in order to once again reconcile divergent institutions. We now turn to the question of how entrepreneurs can respond when faced with misaligned institutions.

4. Entrepreneurial Responses to Institutional Misalignment

The issue of institutional misalignment arises when one or more institutional levels are out of sync with the others. We hypothesize that it is possible for any one level to be disrupted and thus be “pushed” out of alignment with the remaining levels, thereby causing “institutional uncertainty.” Our interest is in how misalignment affects entrepreneurs active in different parts of the economic system and what, if anything, they can do in response. In other words, how do entrepreneurs react to institutional uncertainty and, consequently, the costs it imposes? We an-

swer this question by examining several types of misalignment between institutional levels, as illustrated in Fig 3.

Figure 3 about here

L4 misalignment. In the first case, Williamson’s level L4 is misaligned with the higher levels such that resource allocation and employment, and therefore prices and quantities as well as incentives, deviate from the constraints of levels L1-L3. This means resource allocation in the market is at odds with existing governance structures, contracts and contract law, and basic social norms (Fig 3, panel A). This in turn implies that market exchange is costlier than it otherwise would be, and therefore that entrepreneurs will find it troublesome to “get the marginal conditions right” such that incentives are aligned with institutions.

At L4, the exchange of property is entrepreneurs’ primary means of correcting this misalignment, as simple price discrepancies can be exploited by entrepreneurs engaging in arbitrage for profit (Kirzner, 1973). Arbitrage entrepreneurship provides a means for equilibration *within* L4, where “ordinary” market uncertainty is prominent. However, institutional misalignment is characterized by *structural errors between* L4 and other levels, which cause lasting shortages, surpluses, and other types of inefficient allocation. These inefficiencies are difficult to remove, because misalignment means that entrepreneurs in L4 lack the ability to feedback to institutions on L3. This causes costs to rise, for example, the costs of price discovery (see Coase, 1937) and information asymmetries. Misalignment thus creates uncertainty in simple market transactions. This is a typical problem analyzed in Transaction Cost Economics (Williamson, 1975; 1985), where opportunistic behavior in market transactions causes inefficient resource allocation as transactions suffering from hold-ups become maladjusted to market conditions (Klein, 2010).

To avoid hold-ups and enable profitable transactions, entrepreneurs can switch their action to L3, that is, choose governance structures that facilitate proper adaptation to changing market conditions. One example would be ex ante vertical integration to enable transaction-level decision-making. Without proper governance the outcomes of market transactions—and thus their value for each party—are uncertain, as they depend on trust between parties. Choosing new governance structures may fall outside the scope of arbitrage entrepreneurship, but it is available for Schumpeterian creators of business firms and organizations, as well as for Knightian decision-makers, intrapreneurs, and business strategists. In other words, the misalignment of L4 may prove costly for market exchange, but does not pose an insurmountable problem for entrepreneurs because solutions are typically available through new governance structures in L3, which are common means for entrepreneurs to overcome transactional problems and thereby realign institutions. However, misalignment can persist if it is institutionalized, as in the case of regulatory measures like price controls that prevent market-clearing entrepreneurship from taking place.

L3 misalignment. In the case of L3 misalignment, the problem is to “get the governance structures right.” In other words, existing contracts and organizations are suboptimal in that they are unable to properly support efficient resource allocation in L4 (Fig 3, panel B). At the same time, they are high-cost solutions with respect to the institutional framework in L2, because the governance forms being used are insufficiently supported by the institutional environment. When institutions are aligned, suboptimal governance choice within L3 can be caused by entrepreneurial errors, which are costly when governance choices are inappropriate for the transactions they govern. Feedback from L4 comes through the price system, letting entrepreneurs know that factors of production are mispriced.

However, when L3 is misaligned with other levels, errors have a more lasting character and may not be easily corrected. In this case the constraints of the legal framework at L2 no longer bind governance structures, while at the same time market exchange at L4 lacks a reliable feedback mechanism. This creates uncertainty both above and below L3. Consider an example: a multinational firm expands overseas using a localized version of a governance structure that previously proved successful in its home country. This structure turns out to be inconsistent with local business regulations, which place the firm in a different legal category with disadvantageous rules as compared to both its competitors (L2) and local entrepreneurs' bargaining practices and employment conditions (L4). When there is misalignment in L3 such that all or most governance structures provide high-cost solutions to entrepreneurial problems—perhaps as a result of managerial myopia or because stakeholders in L2 and L4 express skepticism toward low-cost governance forms—the costs are borne by entrepreneurs in the form of high-cost business operations, and by the economic system as a whole in the form of inefficiency. The comparatively high cost at which business “must” be undertaken increases the uncertainty of entrepreneurial investments by reducing overall profitability. Entrepreneurs may respond to this situation by innovating second-best governance options that evade too costly practices, or they can attempt to act in L2 to alter institutions that make the least-cost solutions unavailable.

L2 misalignment. Misalignment of L2 occurs when the values, norms, and customs of L1 are aligned only with market governance and organizations (L3) and market action and exchange (L4). In this case the formal rules of the game, including the legal situation and administrative power of the bureaucracy, do not adhere either to the traditions and cultural values of society or to the ways individuals and organizations actually conduct business (Fig 3, panel C). It corresponds to institutional disequilibrium as discussed in Douhan and Henriksen (2008; 2010) and

Sanandaji and Henreksen (2010). For example, following a coup d'état the new regime might implement laws aligned with its own goals but at odds with society's values and actual market activities. Because these laws are aligned neither with common social values nor business organization and practice, they create uncertainty with respect to the enforcement of new laws as well as contracts and agreements that are already in effect. Misalignment at L2 thus imposes greater costs on society than misalignment in L4 and L3 because entrepreneurs who specialize in acting in L4 and L3 lack the means to directly produce necessary changes to institutions in L2 (Li, Feng, and Jiang, 2006). L2 is the domain of institutional entrepreneurs acting to alter the institutional environment, as distinct from market entrepreneurs, who act in a narrower business environment.

For market entrepreneurs who bear the costs of uncertainty from misalignment in L2, the opportunity cost of leaving L4 and L3 is high, and they may be ill-equipped to change higher-level institutions. An ideal entrepreneur would be able to effect change at all levels (Li, Feng, and Jiang, 2006), but we argue that this kind of universally-successful entrepreneurship is unlikely. Acting within L2 to alter harmful institutions may be an option for market entrepreneurs, but the higher costs should incentivize them to instead relocate within their institutional levels or, if the costs are high enough, close shop. The means used in the political and economic spheres are heterogeneous, and therefore involve different costs, making specialization beneficial. It is true that political and economic actions do not exist in isolation; nevertheless, an entrepreneurial division of labor encourages individuals to pursue the lowest-cost specialization.

L1 misalignment. Finally, misalignment in L1 suggests that the values, traditions, and customs of society are different from both its formal institutional environment (L2) and economic practices (L3 and L4) (Fig 3, panel D). This situation poses a special problem for entrepre-

neurs because the misalignment, from a Williamsonian perspective, manifests on a socially embedded level—ideology, values, norms, etc.—rather than in the form of institutions that can be changed through economic or political means. Realigning L1 with the other levels requires changing social values to make them consistent with existing economic and political actions. We argue that meeting this challenge is largely beyond the abilities of entrepreneurial action because realigning L1 is not subject to economizing efforts, and because all other institutional levels fall within the boundaries of L1—there are therefore no higher levels on which to act in order to constrain and reduce the uncertainty in L1. This claim is illustrated in the next section.

5. Entrepreneurship under Regime Uncertainty

To elaborate and apply the analysis of the previous sections, we now turn to a specific case of uncertainty caused by misaligned institutions known as “regime uncertainty.” Regime uncertainty refers to an environment in which entrepreneurs are highly doubtful about the willingness of political institutions to provide ideological and legal support for entrepreneurial action. It is uncertainty in that it undermines entrepreneurs’ trust in the institutional environment within which they invest resources in promising ventures. In a nutshell,

business people may be more or less “uncertain about the regime,” by which [is meant], distressed that investors’ private property rights in their capital and the income it yields will be attenuated further by government action. Such attenuations can arise from many sources, ranging from simple tax-rate increases to the imposition of new kinds of taxes to outright confiscation of private property. Many intermediate threats can arise from various sorts of regulation, for instance, of securities markets, labor markets, and product markets. In any event, *the security of private property rights rests not so much on the letter of the law as on the character of the government that enforces, or threatens, presumptive rights.* (Higgs, 1997: 568, emphasis added)

Higgs (1997) introduced the concept of regime uncertainty to explain the long-term decline in private investment—entrepreneurial business activity—during the Great Depression. He argued that one of the reasons the Depression lasted so long was that entrepreneurs refrained

from investing due to fears of increasingly aggressive economic policy that they believed threatened not only short-term profits, but the free-enterprise economic system itself. The rhetoric of political leaders and pundits during the New Deal era signaled an ideological shift toward increased regulation of business activity and economic planning, trends that entrepreneurs believed would accelerate and become institutionalized. The administration consistently proposed new ideologically-motivated policies intended to expand the role of government in the economy, most of which were deemed by entrepreneurs to be threats to their profit-seeking activities (e.g. threats to fundamental free-market institutions such as property rights). A key feature of this specific example is that it assumes that institutional quality was relatively high prior to the onset of the Great Depression. In other words, regime uncertainty implicitly involves entrepreneurs' negative assessment of institutional uncertainty. However, other scenarios can be imagined where institutional quality is relatively low to begin with, and where entrepreneurs are more optimistic about institutional uncertainty. Perhaps an example of this would be the trend in "bourgeois dignity" that occurred leading up to the industrial revolution (McCloskey, 2010).

In any case, much of the regime uncertainty that emerged during the Great Depression derived from changes or anticipated changes in the personnel of the administration. The New Deal involved appointing many individuals to key public offices who were widely viewed as being "anti-business," and who therefore produced distrust and doubt among entrepreneurs (Higgs, 1997). However, anti-business positions were not limited to public servants appointed by a regime out of touch with popular opinion; instead, the regime's seemingly radical position reflected a much broader sentiment, indicating that a value shift toward greater skepticism toward markets and business was underway. Support for the regime's ideology-motivated policies surprised economic analysts. For example, Schumpeter (1943: 181) admitted at the time to being

surprised that, with regard to “the policies of the New Deal, we cannot fail to be struck by the absence of any serious resistance to them.” There was little popular disagreement with the shift in economic policy; “resistance” to the New Deal was apparent primarily in the business world—L3 and L4—and in L2 to the degree laws had not yet been changed and were thus relatively supportive of free enterprise.

In such an investment environment, where fears of increased taxation, nationalization, or outright socialization of industry—and the fundamental unpredictability of, and uncertainty in, the future workings of markets—existed, entrepreneurial action and investment were discouraged, ultimately leading to the prolonging of the Depression. This case contrasts with a period of relative regime stability from 1870-1920, when the US was more entrepreneurial and inventive. In particular, the average number of inventions produced during the period was highly correlated to expected rates of return on private investments, which suggests a large degree of entrepreneurial confidence in the business environment (Higgs, 1971). This period thus serves as a benchmark against which to measure the performance of the US economy during the latter years of the Great Depression (especially 1935-1941). The lack of entrepreneurial investment during this period hindered recovery and imposed significant costs on the economy. Of course, private investment is not a perfect measure of the amount of entrepreneurial activity. It is, however, a strong measure of the amount of entrepreneurial confidence in the prospects for future returns, and should therefore strongly correlate with how entrepreneurs perceive the reliability of their institutional environment, especially their estimates of political uncertainty (Julio and Yook, 2012). We therefore, along with Higgs, consider it to be a useful proxy for entrepreneurial behavior, and a lens through which to view shifts in entrepreneurs’ perceptions of the reliability and security of the regime. The ideological basis of this uncertainty places it in L1 in William-

son's schema.

Since Higgs' initial study of the effects of regime uncertainty, further research has expanded his analysis (Wisniewski, 2012) and corroborated his findings in other contexts (e.g. Chamlee-Wright, 2007, Carden, 2008, Coyne and Boettke, 2009, Baker *et al.*, 2011). In particular, recent work has extended the analysis to the sluggish recovery period following the Great Recession, which has been characterized by many of the same fears regarding the future of entrepreneurial institutions (Laer and Martin, 2016). Importantly, although regime uncertainty was originally invoked to describe business investment decisions, we argue that it is particularly important as a problem of entrepreneurial decision-making, and an effective illustration of entrepreneurs' inability to respond directly to institutional misalignment in L1. As we explain, the problem of regime uncertainty revolves around entrepreneurs' expectations about the unreliability or hostility of the regime toward profit-seeking behavior. Where entrepreneurs believe that the regime is trustworthy and holds values beneficial to business and property rights in line with existing institutions, they can be confident those institutions will be respected such that profits will accrue to the entrepreneurs whose decisions created them. This confidence, which represents the opposite of doubt in the regime, contributes to "regime stability." If the values enshrined in L1 are secure, they will constrain lower level institutions from L2, L3, and L4, thus creating a stable, aligned environment for entrepreneurial action.

Why is regime uncertainty a specifically entrepreneurial problem? It is important to note that there is an important time element in entrepreneurs' perceptions (cf. McMullen & Dimov, 2013). Weak institutions in the present are deterrents to private investment, but expectations about the *future* security of property rights are relevant as well (Brouthers, 1995). In particular, perceptions about future institutions matter greatly for entrepreneurs (Schumpeter, 1939:

1038-1050). These perceptions depend less on the formal protections provided by government and more on its expected *de facto* policies (Rapaczynski, 1996). If property rights are effectively secure today, this fact makes little difference if entrepreneurs are convinced (even if erroneously) that at some relevant point in the future there will be little or no regime security. Regime uncertainty exists because entrepreneurs are doubtful about the regime's intentions toward the institutions on which they rely and, where action is expected, entrepreneurs cannot determine what types of changes will actually be made. Although entrepreneurs have their own doubts and suspicions, they cannot be sure, because "the *potential* use of power does not necessarily translate into its *actual* use in business-government relations" (Stevens, Xie, and Peng, 2015; emphasis in original).

Instead, entrepreneurs' judgments and "gut feelings" depend on the regime's proposed policies and its rhetoric, both of which provide insight into the ideological convictions prevalent among political decision-makers, which may be more relevant to entrepreneurs than actual policy decisions. As evident from Higgs' analysis, regime uncertainty does not necessarily refer to current economic policy as such, but to the uncertainty accompanying the *possibility* of future changes in ideology, and eventually, policy. Since entrepreneurship involves speculative decisions about the future state of investments (among other things), it follows that, other things equal, *market* entrepreneurial activity will be discouraged when regime uncertainty is present.

Now that we have established the relevance of regime uncertainty for entrepreneurs, it remains to further unpack the underlying uncertainty involved. If, as we argue, entrepreneurship involves bearing uncertainty, then regime uncertainty raises an important question: how can it be that entrepreneurs—whose function in the economy is to overcome uncertainty—have difficulty responding to *regime* uncertainty? This question is especially relevant given that in some condi-

tions, entrepreneurs actually *increase* their investment activity in response to “extreme” uncertainty (Huang and Pearce, 2015).

The answer is that, for entrepreneurs, regime uncertainty represents more than doubt about the ordinary condition of the market, even extreme doubt. Rather, under regime uncertainty, entrepreneurs expect their decision-making *environment* will be fundamentally altered. Regime uncertainty is special because it manifests on an institutional level that offers no means for entrepreneurs to effectuate change or to take defensive action. Entrepreneurship is carried out in a market regime where the rules of the game may change, but are ultimately constrained by the values of society, and thus a certain degree of inertia is always expected. Rapid change may occur in consumer preferences or market prices, but the fundamental values driving the market economy evolve more slowly; for instance, prices, quantities, and even terms of contracts may change from moment to moment, and legal mandates and enforcement may also change over time. But basic respect for and valuing of institutions like contracting and property rights—ultimately based in the norms and traditions of society at large—must usually be taken for granted; they rarely change in a radical way. Entrepreneurs can cope with the former types of uncertainty (and do on a daily basis in the market, as well as through institutional entrepreneurship), but rely on the stability of L1 to pursue opportunities and allocate resources.

Figure 4 about here

The entrepreneurial problem of regime uncertainty can be explained by considering entrepreneurial behavior in light of Williamson’s levels of institutional analysis. Entrepreneurship typically occurs using economic means within L3 and L4, and can also adopt non-market strategies to effectuate change in L2. We can therefore make sense of regime uncertainty as a conflict

between phenomena embedded in the specific structure of different institutional levels. Whereas the “regime” itself consists of L2’s formal rules and regulations to which entrepreneurs must conform their judgments, ideology and thus the norms and values that call for change in the rules of the game belong to L1. As noted above, market entrepreneurship falls outside this category, because entrepreneurs act (invest) for the purpose of satisfying consumer wants (for profit) within given institutional frameworks. As Higgs (1997) notes, it was the uncertainty surrounding the future transformation of the economy that posed such a problem for pre-WWII investment spending—that is, expected far-reaching changes to the functioning of the economic system: ideological change that constrains both the rules of the game and the play of the game. Granted, the New Deal also reflected a significant shift within L2 that changed the play of the game, but it was persistent public debate and the rhetoric of political decision-makers that rendered entrepreneurs unable to judge what to expect from future changes to the economic system—a shift in L1 (Fig 4). As we noted above, a change in L1 changes the constraints on lower levels that therefore will, to some extent, shift to find a new institutional equilibrium—but the exact nature of this new institutional setting, or the order in which it is implemented, is unknown. This sort of uncertainty involves not so much uncertainty regarding entrepreneurial success or failure (whether and how much profit can be generated), but rather the outcome of success or failure (whether rewards will accrue to entrepreneurs *no matter what decisions they make*). In a fundamental sense, then, regime uncertainty disconnects ends from means, whether direct or indirect, undermining what Kirzner (1973) and Shane (2003) refer to as the “means-ends framework.”

“Trust in the system” is essential for entrepreneurs to be able to calculate the expected profitability of investments (Mises, 1951). Without being able to rely on the framework for market action, the entrepreneur becomes more disconnected from the foundation she uses to form

judgments, discover potential profit opportunities, and estimate the profitability of business. In this sense, entrepreneurship appears to require a certain degree of economic freedom to support innovation and experimentation (cf. Kreft and Sobel, 2005, Bjørnskov and Foss, 2008, 2012, 2013, Nyström, 2008) within a framework of aligned, stable institutions, or the “rule of law.”

Our analysis of regime uncertainty provides one example of why it is valuable to understand change and uncertainty among different institutional “levels,” which have fundamentally different implications for the market system and therefore also entrepreneurial practice. Entrepreneurs can handle and even overcome or benefit from uncertainty in the context of market action—L3 and L4—but find it more costly and difficult to effect change in policy, that is, to *alter* institutions. Whereas their market-level actions can affect the institutional environment, ideological changes can only be hoped for because they fall outside the boundaries of effective entrepreneurial action. In this specific sense, they are not subject to entrepreneurs’ direct influence, and changes to them are attributable to luck more than to good judgment (Demsetz, 1983; McCaffrey, 2016). Entrepreneurs have little means to influence the direction of such changes. Part of the reason is that ideological trends and social norms relevant to entrepreneurs often change slowly and infrequently (Kalantaridis, 2014) and therefore are outside the scope of practical calculative action. Another part of the reason, which directly relates to our application of Williamson’s model, is that entrepreneurial responses to institutional misalignment typically involve action at the higher level that constrains action on the lower (misaligned) level. Yet because L1 is the highest level it is also unconstrained, as there are no institutional boundaries for changes in values, norms, and culture. Entrepreneurs thus cannot economize with respect to this level. Our institutional approach thus provides one way of looking at the “critical area of inquiry” that appears at the crossroads between entrepreneurship, economic development, and in-

stitutions (Acs, Desai, and Hessels, 2008).

6. Discussion

We have identified and explained a key component of the relationship between entrepreneurship and uncertainty, namely, the role of uncertain institutions in entrepreneurial decision-making. While the discussion of uncertainty as an important dimension of entrepreneurship is hardly new, the specific effects and implications of uncertain institutions have been insufficiently studied. We fill this gap in the literature by analyzing how uncertainty affects entrepreneurship on different institutional levels. Specifically, we use Williamson's (1998; 2000) model of institutional levels of economizing as a lens to better understand the types of institutional uncertainty that entrepreneurs face, as well as how entrepreneurs can respond to their challenges. In line with Williamson's model, we find that entrepreneurs have the means to bear and even to overcome institutional uncertainty arising due to misalignment in three of the four levels. We also further developed the concept of "regime uncertainty," a seemingly paradoxical problem for entrepreneurship, to illustrate entrepreneurs' inability to bear uncertainty emanating from unpredictability due to misalignment in the fourth, social embeddedness level.

Our findings can be understood as an elaboration of the literature on entrepreneurial decision-making, as well as an integration of this new framework with literature on institutions and institutional entrepreneurship. There are several advantages to this approach. First, disaggregating institutional levels, their relatedness and alignment, and the uncertainties attached to them, provides a novel way to distinguish between different types of entrepreneurial decision-making. It is generally acknowledged that uncertainty is a key feature of the entrepreneurial environment (McMullen and Shepherd, 2006; Foss and Klein, 2012), but the exact relationship between en-

entrepreneurial action and decision-making is often vague, as is the role of uncertain institutions. In particular, little attention has been paid to the possibility that conflict between different types and time horizons of institutional change can produce distinct kinds of uncertainty that in turn require distinct types of entrepreneurial action and judgment to overcome. Yet as we have shown, uncertainty due to misalignment between different institutional levels can provoke a wide variety of responses among market entrepreneurs within levels, some of which are more effective than others. Institutional uncertainty also encourages institutional entrepreneurship *between* levels in an attempt to reconcile social constraints and feedback mechanisms, thereby reducing uncertainty and nudging the institutional environment toward alignment, a kind of equilibrium. The idea that entrepreneurial actions can be undertaken within and between levels, and that such actions are responses to institutional uncertainty, offers a more nuanced way to view the constraints as well as the incentives that institutions provide for entrepreneurial action.

A second advantage of our approach is that it allows researchers to better trace the effects of entrepreneurial action on the institutional framework in which *other* entrepreneurs act. This point is illustrated through the example of Uber and its rivals in the traditional taxi business. Uber's entry into the passenger transport market changed the conditions under which incumbent taxi companies offered their services. Indeed, taxi companies counted on the existing institutional environment (L2) to protect incumbents by raising regulatory barriers to entry. Uber's creation of a new type of passenger transport service both sidestepped and challenged the institutions taken for granted by taxi companies. To the extent Uber's business model created a new market, it caused a shift in L3 by introducing a new organization of transportation services, which in turn also affected L4 by changing relative prices and resource allocations. The shifts in L3 and L4 also had repercussions on the institutional framework, which was aligned specifically with in-

cumbent taxi services and therefore misaligned with new ridesharing businesses. In other words, Uber's entry caused institutional misalignment and institutional uncertainty that are changing the conditions of—and may ultimately disrupt—the taxi business. Our model thus shows how economic and political actions in the taxi industry can be explained in the context of institutional uncertainty, and how the implications of entrepreneurial action can be traced through its effects on distinct institutional levels.

Third, our analysis illuminates other findings in the entrepreneurship literature by suggesting how and why entrepreneurs choose to act in the non-market realm of politics, or what Henrekson and Sanandaji (2011) call “institutional entrepreneurship.” Where formal institutions and policy restrict the scope of entrepreneurial action in ways that entrepreneurs (or their customers) consider illegitimate or arbitrary, entrepreneurs may choose to evade those institutions through action in L3 or attempt to alter them directly by taking action in L2. Entrepreneurs who choose to pursue political influence in L2 may be tempted to use the political apparatus not only to defend the market, but also to pursue privileges or other political measures to subdue competition, *i.e.* to rent-seek. If left unchecked, institutional uncertainty may therefore snowball into large-scale adoption of unproductive or even destructive entrepreneurship that could drain the market of capital by redirecting investments toward seeking political favors rather than creating value for consumers (Laer and Martin, 2016).

A fourth advantage is that our approach provides a foundation for conceptualizing the ultimate institutional limits of entrepreneurship. That is, there are types of institutional uncertainty that create seemingly insurmountable obstacles to entrepreneurial action. Although entrepreneurs can act to influence institutional conditions, at some point market entrepreneurs must take them as given. This is particularly true of fundamental social institutions: when they become uncer-

tain, the most basic assumptions entrepreneurs make about the social world are thrown into doubt. This in turn undermines entrepreneurs' abilities to allocate resources, alter governance structures, and to directly influence social change through institutional entrepreneurship.

An important historical example of insurmountable institutional uncertainty is the regime uncertainty of the Great Depression era. In this case, ideological changes systematically undermined entrepreneurs' assumptions about their institutional constraints. Yet although we illustrated our conceptual model using this specific example, our analysis is relevant for many other problems in entrepreneurship and related fields, including endogenous vs. exogenous institutions (Kalantardis, 2014, Douhan and Henrekson, 2010), institutional voids (Puffer, McCarthy, and Boisot, 2010), "public entrepreneurship" (Klein et al. 2010), "policy entrepreneurship" (Mintrom, 1997), "policy uncertainty" (Baker, Bloom, and Davos, 2011, Julio and Yook, 2012), and "political risk" (Stevens, Xie, and Peng, 2015, Agarwal and Ramaswami, 1992).

Institutional uncertainty also carries important implications for empirical problems in entrepreneurship and the theory of the firm. For example, lasting institutional uncertainty may have decisive effects on market structure. In this environment, small entrepreneurial ventures and startups may feel especially vulnerable if, due to their size and hence their limited impact on the economy, they are not considered politically significant. This can in turn lead to additional mergers and acquisitions in order to increase firm size and thereby increase political importance and protection, which small businesses usually lack in environments of poor political institutions (Manolova and Yan, 2002, Tonoyan et al., 2010, Williams and Vorley, 2015). Institutional uncertainty could therefore—and this hypothesis appears to be in line with Williamson (2000)—be a driver of firm size in industries subject to, for example, destructive institutional entrepreneurship by incumbent firms. A full analysis of this problem is outside the scope of the current paper,

but provides wide latitude for future research. In addition, important empirical research remains to be done on reactions to and the long-term effects of institutional uncertainty. Further, given that numerous measures show increases in uncertainty during recessionary periods (Bloom, 2014), many questions could also be posed about the financial crisis of 2008, and the policy response to it (Laer and Martin, 2016).

While these and other important questions remain to be answered, our analysis nevertheless provides a framework for further study of the effects of uncertainty in political decision-making, especially the degree to which public policy creates institutional uncertainty, and thus affects the persistence and reliability of market institutions, as well as how entrepreneurs perceive them. It also offers a model that allows us to study specific institutional changes and to trace their effects across multiple institutional levels or contexts. This model illuminates the relationship between entrepreneurship and uncertainty, especially as entrepreneurship pertains to uncertainty at different levels of institutional activity. Future research should attempt to specify the empirical nature of this relationship and elaborate on the theoretical implications of the above analysis.

7. Conclusion

This article investigated the vital entrepreneurial concept of uncertainty as it relates to the institutional structure of society. We introduced a framework for understanding “institutional uncertainty” that emphasizes how uncertainty appears at different institutional “levels.” This approach shows that different types of uncertainty (that is, types that arise on different institutional levels) affect entrepreneurship in diverse ways and thus warrant different responses. Common business entrepreneurship, which is carried out on the lowest institutional levels of market exchange and governance structures, is well-suited to overcoming uncertainty on those levels.

However, uncertainty at the level of the institutional environment warrants institutional entrepreneurship aiming specifically to alter formal institutions. The most difficult case for entrepreneurs involves shifts in the deepest values and norms in society, which typically create a type of uncertainty that falls outside the reach of business entrepreneurs. We illustrate this problem using the example of “regime uncertainty,” a specific type of political uncertainty that undermines entrepreneurs’ ability to engage in productive business entrepreneurship.

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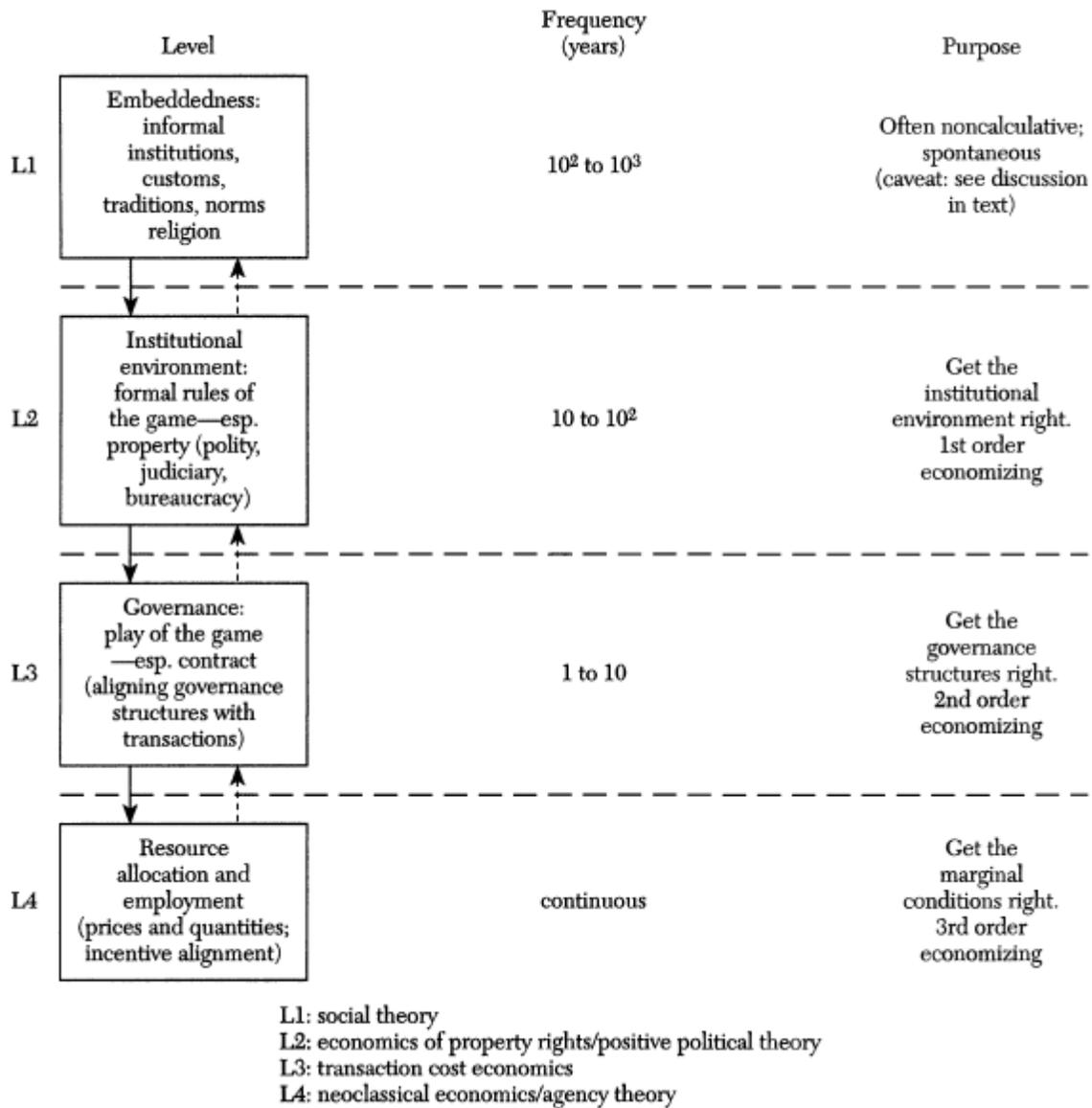


Figure 1. Levels of the economics of institutions (Williamson, 2000, p. 597)

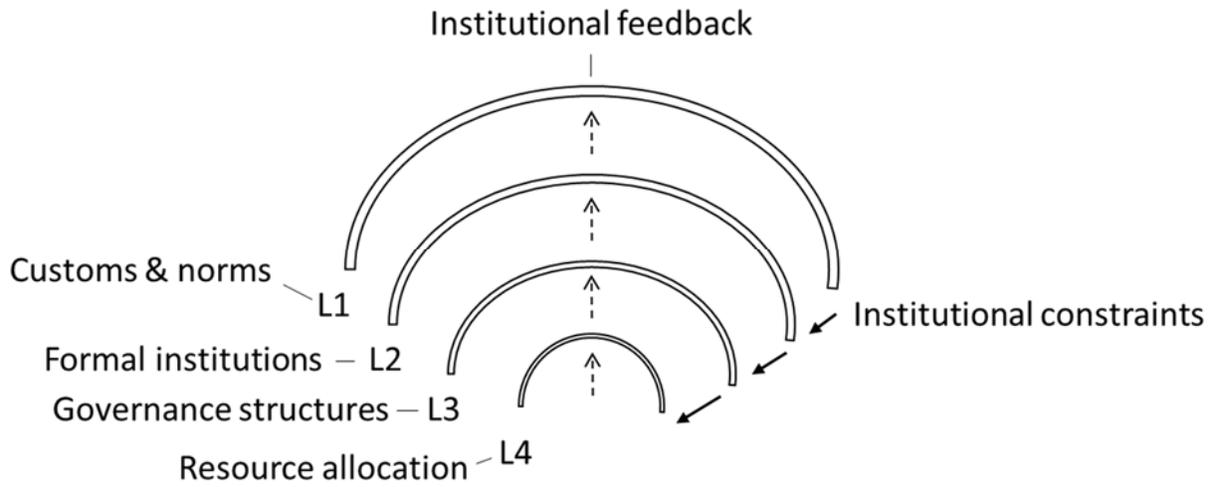


Figure 2. Institutional levels in alignment

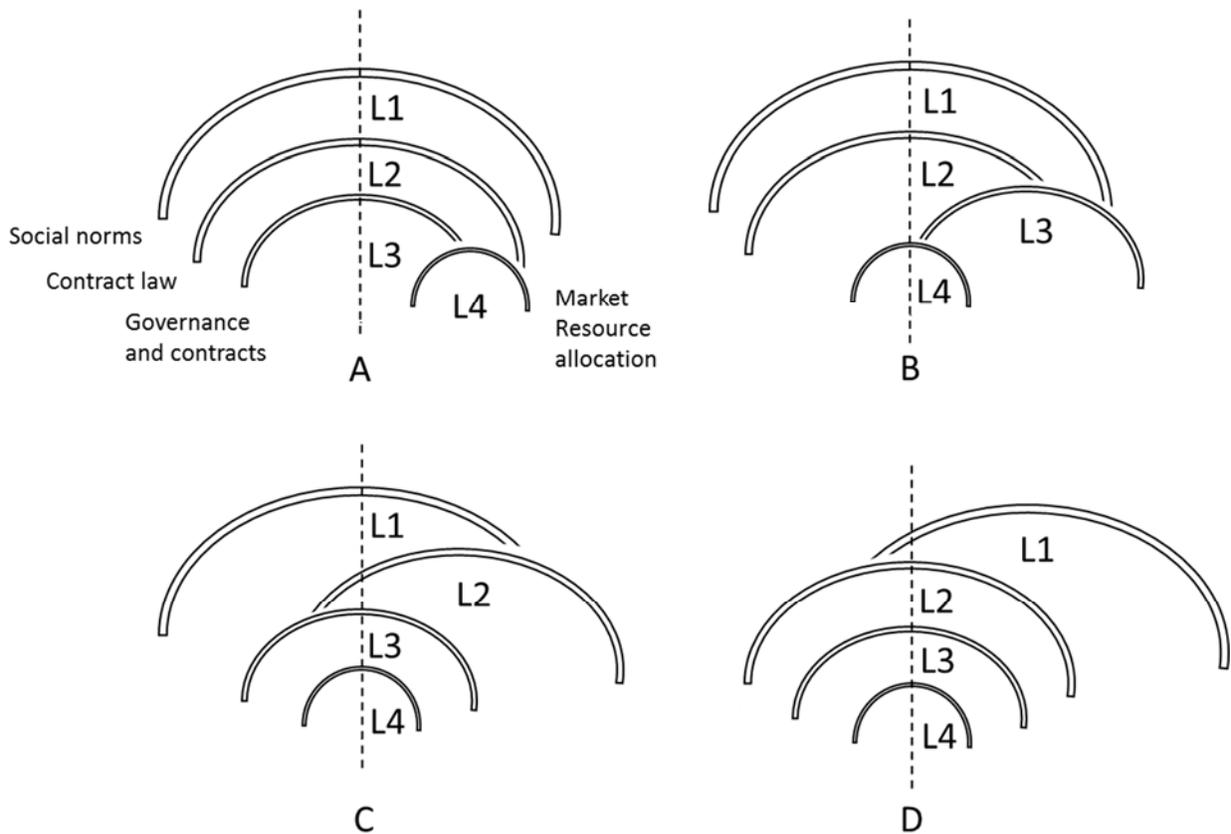


Figure 3. Institutional misalignment in L4, market resource allocation (panel A), L3, governance structures (panel B), L2, formal institutions (panel C), and L1, social and cultural norms (panel D), respectively.

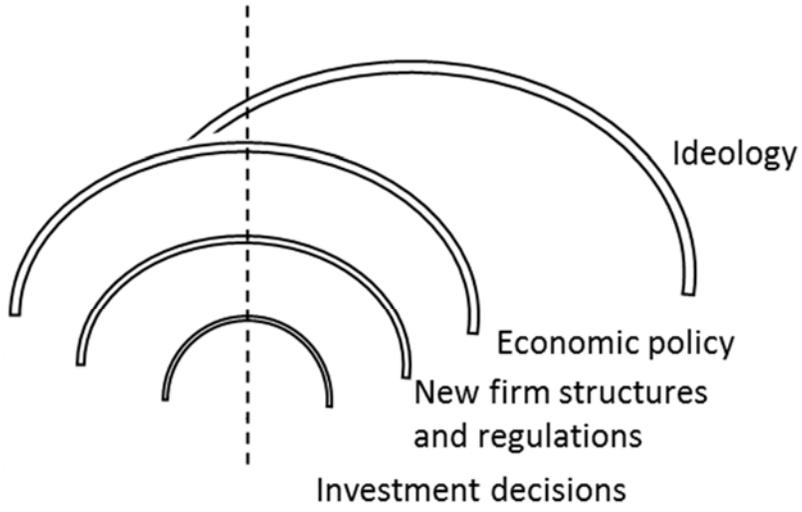


Figure 4. Regime uncertainty as institutional misalignment of L1.