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Surveying the Transaction Cost Foundations of New Institutional Economics: A Critical Inquiry

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Abstract: The purpose of this article is to appraise the analytical usefulness of the new institutionalist approach by investigating the explanatory capacity of the transaction cost concept. After a discussion of the problems of defining the concept of transaction costs through the identification of three different uses of the term found in the literature, we turn to the problems associated with the analytical distinction between the institutional environment and organizations as players of the game, and more specifically to the treatment of organizations as individual actors. Further, it is shown that transaction costs as a concept is inherently unqualified for operationalization. Last, we examine the usefulness of the transaction cost concept in explaining the emergence of organizations by focusing on two specific cases, Coase's and Williamson's theories of the firm. Our conclusion is that the transaction cost concept cannot provide a sufficient rationale for explaining either the emergence of institutions or the origins of organizations given its static, ahistorical and universalistic nature.

Keywords: firm, institutions, organizations, power, transaction costs

JEL Classification Codes: B52, D02, P14

In November 2009, Oliver Williamson was awarded the Nobel prize in economics, alongside Elinor Ostrom, a political scientist.[1] This follows the award to Ronald Coase in 1991 and to Douglass North in 1993. Between them, Coase, Williamson and North, are the founders and most important representatives of new institutional economics. This third Nobel prize is symbolic of the continuing vitality of the new institutionalist research program within, and around the borders of, mainstream economics as well as the occasional idiosyncrasy of the Nobel awards.

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Transaction costs constitute the most important explanatory variable for the study of institutions and organizations within new institutional economics.[2] In contrast to standard neoclassical theory, which presumes an idealized frictionless world, the new institutionalist perspective employs the notion of transaction costs as an explanatory device in exploring areas of economic and social life that have previously been neglected by orthodox economic theory. In particular, it stresses the significance of positive transaction costs in accounting for the existence and evolution of institutions. In this vein, the concept of transaction costs has become fundamental for explaining the origins, persistence and change of institutions and organizations. According to this view, the rationale for the existence of any given institutional or organizational form is its cost-efficiency compared to the set of available alternatives (markets, hierarchies, networks etc.).

Within new institutional economics the use of the concept of transaction costs has become the basis of the analysis of the firm (Coase 1937; Williamson 1975, 1985) and of an approach to the theory of institutions more generally, and of property rights in particular, linked mainly with the works of Alchian and Demsetz (1973), Demsetz (1967) and North (1981, 1990). It should be stressed from the outset that the analysis that follows considers the transaction cost theory to be not merely a theoretical device, but purports to explain the real historical evolution of institutions and organizations. Hence, savings on transaction costs are introduced to explain the emergence of non-market institutions in history generally, and the modern firm in particular. For instance, in North's (1981) economic history and in Demsetz's (1967) theory, transaction costs have been used as an explanatory tool for the exegesis of the existence of formal institutional arrangements (e.g., property rights), while Williamson (1980) uses the concept of transaction costs to investigate the historical origins of the factory system.

The main focus of this article is the investigation of the analytical usefulness of this approach. In the second section, the problems in defining the concept of transaction costs are brought to the fore through the identification of three different uses of the term, what we call market transaction costs, supervisory transaction costs and property rights transaction costs. It is argued that market transaction costs cannot be separated from property rights transaction costs because property rights are indirectly involved in the generation of market transaction costs. In the third section, we turn to the problems associated with the analytical distinction between the institutional environment and organizations as players of the game, and more specifically to the treatment of organizations as individual actors.

Granted that the operationalization of transaction costs through quantification and measurement is a *sine qua non* condition for the validation of the theory, in the fourth section we question the validity of the transaction cost rationale by pointing out that the concept is inherently unqualified for operationalization. In the fifth section, we examine the validity of the transaction cost concept in explaining the emergence of organizations by focusing on Coase's and Williamson's theories of the firm. Our conclusion is that the transaction cost concept cannot provide a sufficient rationale for explaining either the emergence of institutions or the origins of organizations given its static, ahistorical and universalistic nature.

The Uses and Abuses of the Transaction Cost Concept

One major problem facing new institutional economics is the lack of clear definitions of the concepts used. Williamson's theory, for example, is based on vague and elusive definitions of his basic concepts. For instance, in his most influential work, Williamson (1985) defines neither capitalism nor institutions and organizations ("governance structures"), which are the basic concepts that he is supposed to be explaining. As Zald (1987, 706) has argued, "no attention is given to defining them or to thinking about institutions as a concept. By 'institution', Williamson seems to mean any form of social organization from a type of contract . . . to a type of law . . . to a type of complex organization. . . . Now, there are institutions and there are institutions. All social arrangements are not equally institutionalized" (see also Pitelis 1998).

Hodgson (2006) in a recent article has tried to rectify this through a comprehensive discussion of the different definitions and the problems involved in defining terms such as rules (formal and informal), institutions, organizations conventions, habits, and makes an attempt to give some tentative definitions himself. He defines institutions as "systems of established and embedded social rules that structure social interactions," and rules as "socially transmitted and customary normative injunctions or immanently normative dispositions, that in circumstance X do Y." Organizations, in turn, "are special institutions that involve a) criteria to establish their boundaries and to distinguish their members from nonmembers, b) principles of sovereignty who is in charge, and c) chains of command delineating responsibilities within an organization." Formal institutions are generally meant as institutions that are explicit, written or legal, while by informal institutions we generally mean non-formal, non-legal or inexplicit. Hodgson believes that the terms formal and informal are not clear and should be substituted by terms such as legal, non-legal and explicit (18). In what follows, the terms formal and informal are kept because they are used widely. In this section, we focus exclusively on the problems associated with the concept of transaction costs.

Even though new institutional economics is almost entirely built around the notion of transaction costs, the concept itself remains notoriously vague and largely elusive. Within the new institutional literature there is lack of clear definition and every scholar has his/her own definition, or rather description. The absence of a clear-cut definition made Williamson (1979, 234) concede that "a consensus on transaction costs is lacking." This absence has prompted Fisher (1977, 322) quoted in Hodgson (1988, 200), to declare that: "Transaction costs have a well-deserved bad name as a theoretical device, because solutions to problems involving transaction costs are often sensitive to the assumed form of the costs, and because there is a suspicion that almost anything can be rationalized by invoking suitably specified transaction costs." A similar comment is made by Dahlman (1979, 144), who remarks that the concept of transaction costs "has become a catch-all phrase for unspecified interferences with the price mechanism." The vagueness surrounding the concept of transaction costs has attracted criticism and remains a liability on the balance sheet of new institutional economics.

Nevertheless, upon a closer look, we can generally distinguish between three different definitions of the concept of transaction costs. The first is what we call "market transaction costs" referring to the cost of writing and enforcing contracts (Coase, Williamson and North). The second is what we shall call "supervisory transaction costs," or the costs incurred inside hierarchical forms of organizations (North, Williamson). The third is what can be termed "property rights transaction costs" referring to the relative ease of transacting (undertaking exchange) under different kinds of property rights regimes (Alchian and Demsetz, North, and Barzel).

The origin of the concept of transaction costs itself can be traced back to Coase's seminal articles "The Nature of the Firm" (1937) and the "Problem of Social Cost" (1960).[3] Williamson (1975, 1985) is the main writer within the new institutionalist camp, who extends Coase's contribution in the direction of the "market transaction cost" logic. Following Coase, Williamson points out that transaction costs comprise the *ex ante* and the *ex post* costs of assigning a contract. The former refer to the costs of drafting, negotiating and safeguarding an agreement. The latter contain the "maladaption costs" (i.e., "costs incurred when transactions drift out of alignment"), the "haggling costs" (i.e., costs associated with efforts to correct ex post misalignments), the "set up and running cost" (i.e., costs referred to a third party, which is charged to resolve disputes) and the "bonding costs" (i.e., costs associated with efforts to secure commitment) (1985, 20-22).

Coase and Williamson define what we have called "market transaction costs" as the costs of trading across the market and generally, model transaction costs explicitly and analytically in terms of *ex ante* and *ex post* costs of market contracting. The presumption is that "in the beginning there were markets" (Williamson 1975, 21). In this way, the existence of the market becomes the primal condition for explaining the existence of other institutions and organizations. Coase and Williamson focus on one specific organization, the capitalist firm. We can call this the Coase-Williamson scenario of the origins of the firm. In it, the firm is treated as a transaction cost minimization device.

Besides its vagueness, Coase's and Williamson's conceptualization is erected on the premise that transaction costs arise out of a contractual process. The implication is that they presuppose the existence of well-defined (private) property rights and a market system, where contractual exchanges take place. In other words, they presuppose the existence of a given institutional framework that determines the terms and conditions of exchange. In this way, the market transaction cost approach attempts to explain the emergence of non-market organizations within a given institutional environment.

Implicitly, what is involved here is a comparison between the transaction costs involved in market exchange, with the "supervisory transaction costs" associated with a hierarchical form of organization. What is implicit in Coase and Williamson is made explicit by North:

> The choice of organizational form will be dictated by the relative amount of resources required for a given amount of output. A market-price system

> is costly because it is costly first to measure the dimension of the good or service transacted and to enforce the terms of exchange . . . In contrast . . . the costs of [hierarchical forms of organizations] are the costs of measuring the performance of agents; the inefficiencies associated with imperfect measurement; and the costs of enforcement (1981, 33-34).

North then goes on to apply this comparative transaction cost analysis to develop a general theory of the emergence of institutions in history.

In one of his most general formulations North (1990, 7) claims that "my theory of institutions is constructed from a theory of human behavior combined with a theory of the costs of transacting. When we combine them we can understand why institutions exist and what role they play in the functioning of societies." In this vein, for example, North (1981, 42, 129-131) employs a comparative transaction cost argument in order to explain the emergence of alternative "contractual arrangements in exchange [which] predate the price making market." The existence of these alternative forms of contractual arrangement, according to North, is the result of the high transaction costs of organized markets in the absence of well-defined and enforced (private) property rights. Similarly, the emergence of the institution of serfdom in Western Europe in the tenth century is again attributed to the higher (market) transaction costs of organized markets in the absence of well-defined and enforced property rights, relative to the (supervisory) transaction costs associated with the employment of serf labor by the lord.[4] North generally invokes high transaction costs associated with the market to explain the existence of non-market institutions, even before the emergence of markets.

North's argument is problematic on both logical and historical grounds. First, markets cannot exist without some rules governing exchange. Hence the logical priority of rules vis-à-vis the market (Field 1981). Second, since exchange cannot take place without production, the latter also logically precedes the former (Ankarloo and Palermo 2004; Fourie 1993). Hence serfdom, which is a production institution, logically precedes market exchange and, as such it cannot be theoretically explained by invoking the higher transaction costs associated with the latter. The same applies to the (capitalist) firm vis-á-vis the market. Third, historically it is questionable whether trading goods can be considered a viable alternative before the prior emergence of markets (Milonakis and Fine 2007, 48-53).

The last form of transaction costs we encounter in the literature are those associated with different forms of property rights, what we call "property rights transactions costs." This is found mostly in the property rights literature involving the works of Alchian and Demsetz (1973), Barzel (1997) and Demsetz (1967). From this perspective, Furubotn and Richter (1991, 8) argue that "the creation, enforcement and, if required, the restructuring of institutions and the 'rules of the game' in an autonomous community represent activities that are associated with . . . transaction cost." North (1990, 28), in a later work, defines (property rights) transaction costs as the "costs of defining, protecting and enforcing property rights." Barzel (1997, 4) echoes this by saying: "I define transaction costs as the costs associated with the

transfer, capture and protection of rights" (see also Allen 2000, 898 and Furubotn and Richter 1998, 43).

Within this framework a comparative transaction cost exercise is invoked in order to explain the emergence of (private) property rights and other institutions, i.e., the rules of the game. Hence, the institutional environment is no longer considered an exogenous parameter in transaction cost theory, but represents the very *explanandum* of the theory.[5] At the core of the "property rights transaction cost" approach is the argument that specific forms of property rights, emerge in order to minimize transaction costs. Demsetz (1967) in particular utilizes a transaction cost approach in explaining the origins and existence of private property rights by emphasizing the possible high negotiating costs between agents associated with communal relative to private property rights.

One immediate problem with these different definitions is that a hard and fast distinction between market transaction costs and property rights transaction costs cannot be maintained since property rights are also indirectly involved in the generation of market transaction costs. This is because a functioning market is based on a number of well-established institutions (e.g., property rights, common law etc.) and rules that define and assure exchange, that is on the configuration of the entire institutional environment. In this way, market functioning assumes a pre-existing structure of constituted property rights and institutions. As such, the latter is also indirectly involved in the generation of the transaction costs associated with the market. Hence, for example, the more well-established and the better enforced the property rights system, the lower market transaction costs are.

That the level of transaction costs is dependent upon the institutional and property rights structure, is an indispensable part of the new institutional argument. North (1981, 35-36) himself makes this explicit when he writes that underlying market exchange is "a complex structure of law ['an accepted structure of property rights'] and its [their] enforcement." Furubotn and Richter (1991, 11) also argue that "assuming that individuals act rationally, it can be assumed that the level of transaction costs depends on how the institutional framework, including property rights is organized. The particular form of the institutional framework affects transaction costs by influencing the rewards going to individuals." And for Cheung, transaction costs are the "institutional costs," since "these costs certainly cannot exist in a Robinson Crusoe economy. *They arise only where there are institutions* or in a 'society' in the plain sense of the term" (1998, 515; emphasis added). Hence, market transaction costs cannot really be considered apart from property rights transaction costs since the latter is involved, even if indirectly, in the generation of the former.

Rules and Players

North (1990, 4-5) distinguishes between two levels of analysis. The first level comprises the institutional environment or framework, providing the "rules of the game" affecting and shaping behavior, while the second includes the "players of the game" or organizations in North's terminology. "What must be clearly differentiated,"

he says, "are the rules from the players" (4). "If the institutions are the rules of the game, organizations and their entrepreneurs are the players. Organizations are made up of groups of individuals bound together by some common purpose to achieve certain objectives" (North 1994, 361). Thus, for North the institutional framework represents the "constitutive rules" of the game where various organizations interact. In this vein, the emergence and development of organizations depend, primarily, on the pre-existing institutional framework.[6]

Given these two levels of analysis, new institutional economics took shape in two directions. One deals with background conditions, namely the "rules of the game," while the second deals with the mechanisms of organizational structures, the "players of the game." In particular, new institutionalists use the concept of transaction costs in order to explain both the institutions and organizations at two discrete levels of analysis. As Furubotn and Richter (1998, 265-266) put it "the New Institutional Economics works at two levels of analysis. There is a macroscopic level that deals with what Davis and North (1971, 6) call the *institutional environment* and a microscopic level that the same authors call *institutional arrangement*. Williamson (1993, 53) speaks of the institutions of governance. Williamson's transaction-cost economics deals with the latter . . . North (1990), on the other hand, uses the concept of transaction costs to analyze the institutional environment."

There are two things worth noting with respect to North's analytical distinction between institutions and organizations. First North identifies institutions with rules and organizations with the players of the game and makes a clear differentiation between the two. Second, in typical individualist fashion, he treats the organizations/actors as unitary players "bound together by some common purpose to achieve certain objectives." This "as if individual" treatment of organizations is typical of North. In previous work, North (1981, chs. 3-4) has treated the state in the same way, as an individual ruler maximizing either his own or society's welfare subject to competitive and transaction cost constraints (see also North 1997, 8-9).

There are, however some major stumbling blocks in trying to sustain such a clear-cut distinction between the institutional environment and organizations. For one thing, the institutional environment of organizations includes other organizations such as the state. On the other hand, organizations themselves are made up of rules. Organizations and institutions are interlinked or vested within one another. They are not entirely separable species. Hodgson (2006, 8-13) has argued that treating organizations simply as individual actors is problematic to the extent that organizations are *defined* as actors. If, however, it simply represents an *abstraction* from the internal relationships and mechanisms within organizations, he considers the treatment of organizations as individual players a legitimate analytical exercise. This abstraction, according to Hodgson, is legitimized by North's "primary interest in economic systems" and "on interactions at the national and other higher levels" (9).[7] To that extent, he argues, an organization can be treated both as an institution and as an (individual) actor depending on the context. This "abstraction" amounts to what Mäki (2004, 321) has called "internal isolation" which "takes place when a system is

isolated from influences from within the system." It is a similar isolation to the neoclassical treatment of firms as black boxes devoid of internal structure (327).

However, there is more to North's treatment of the organizations/players as individual entrepreneurs than a mere convenient abstraction/isolation for the purpose at hand. No matter the continuous emphasis on institutions, norms etc., what lies behind North's treatment of organizations as individual actors is the consistent and pervasive individualistic outlook of his methodological and theoretical approach. This is evident, first, in the way he treats institutions. These are seen as the result of individual action and, once in place, they are simply treated as constraints on individual action rather than shaping and enabling this action (North 1981, 44; 1990, 3-6; Fine and Milonakis 2003, 566-568). There is a strong reductionist element which lies in North's implicit claim that *all* institutions can be endogenized starting from some pre-institutional state; that "social norms" and "rules structures" should be explained using a general economic model based on people's individual motivations. As Field (1981) has shown, however, this reductionist program is impossible to attain. Following Schumpeter (1961, 5), for whom the search for causal relations between two phenomena we must continue until "ground upon a non-economic bottom," Field has argued that rule structures are the bedrock of this non-economic bottom (1981, 176). As such "rules logically antedate the market" (193).

Second, the concepts of power and conflict which should be an integral part of any treatment of organizations, are either totally lacking as in North's earlier work on institutional change (see North and Thomas 1973 and North 1981) or, to the extent they are incorporated, as in his later work (for example North 1990), are treated in an individualistic fashion where power relations are assumed to hold between atomistic individuals. Let us take each in turn.

If power and conflict are simply explained away as a necessary abstraction, then it must be said that this is a violent abstraction that takes away some of the most essential social ingredients of an organization. As such, it does violence to the very (institutional) essence of an organization, while it also omits one of the most important factors fueling social change. As a result it cannot be considered as a legitimate abstraction. If, on the other hand, power is applied only at an interpersonal level, between asocial maximizing individuals, this deprives the analysis of any reference to social structures and relations wherein the power itself is based, reflecting the position different actors hold within the social system and the resources they are thereby able to control. In this vein, power analysis is restricted to the level of the individual in a bargaining context, i.e. to the relative capacity of an agent to achieve goals over somebody else's, leaving aside structural factors. Eventually, for North, power as an *explanan* for the analysis of state and institutions refers exclusively to individual power and not to social power arising from property relations and the institutional setting.

But the individualistic conception of power (bargaining power in North's terminology), while an important aspect for a theory of institutions, only represents one (and a minor) part of the story, because it is the asymmetrical distribution of power at a social level that lies behind the relations of power at an interpersonal level. Therefore, the formation of property rights and institutions in general, cannot in

principle be seen either as the result of choices made by powerful individuals or by the state, which is itself also treated as if a maximizing individual, since at least in the first instance, individual power is a consequence of social power, which, in turn, is determined by the structural settings of property relations and institutions.

Third, as a corollary, North's theoretical framework is noticeable for the absence of true collectivities and collective agency, which are simply treated as the aggregation of their individual parts. Aggregating over many individual acts does not change their character as individual action. For North (1981, 61-62) only individual agents exist and individual action is the basic motor of change. "The active agents of change [are] overwhelmingly individuals with a direct interest in altering the system" (North 1981, 116-117). For North history is made mostly by individuals, in the form of "rulers" and entrepreneurs (Milonakis and Fine 2007, 39-40). So, although we concur with Hodgson that treating organizations as individual agencies may be a justified abstraction for analyzing economic systems as a whole, this can also justifiably be considered the result of North's consistent individualistic methodological and substantive stance in reducing all agency to individual action. This is a matter of no small importance for his whole theoretical edifice.

To sum up, we have seen that North treats institutions as both the result of individual action and as constraints on such action. If to this is added his treatment of organizations as individual players abstracting from their internal relations and conflicts, one is left wondering what is left of the institutional substance of institutions and organizations worth discussing? The answer is not very much. Treating institutions as mere constraints on individual action and organizations as individual actors defies their very nature as institutions while also relegating or ostracizing altogether relations of power and conflict as basic motors of social change.

The Problem of Measurement

Going back to the transaction cost concept, in addition to the lack of a precise definition of this notion, its operationalization and measurement is also problematic. The concept is based on the assumption that rational individuals calculate the transacting costs of alternative forms of contracting. Accordingly, the operationalization (i.e., the quantification and measurement) of transaction costs becomes a *sine qua non* condition for the validation of the theory. Alchian and Demsetz (1972, 783) pinpoint that the concept of transaction costs has to be measured and expressed quantitatively; otherwise the theory becomes merely a tautological exercise. In a similar vein, Williamson (1989, 229) talks of the need to articulate transaction costs "into a more formal language." Hence, much of the reliability of the theory is based on whether transaction costs are quantifiable in such a way that economic actors can know how to economize upon them. As seen already, in the transaction costs category, new institutionalists include information costs, negotiating costs and those of writing contracts, the costs of protecting property rights and those of enforcement rules and agreements from different contractual arrangements.

Klaes (2000b, 583-587) distinguishes between what he calls the "objectivist approach" to the measurement of transaction costs, associated with Demsetz (1967) and Wallis and North (1986), who try "to measure transaction costs quantitatively with recourse to market prices," and the "subjectivist approach" associated with Cheung (1969) and Williamson who, "in questioning the possibility of arriving at reliable quantitative estimates, attempt a qualitative ranking of alternatives" (Klaes 2000b, 583).

As with all types of costs, any attempt to operationalize transaction costs has to start with the distinction between measurable objective costs (accountancy costs) and subjective costs (economic costs), as an essential element of the choice process. This distinction reveals insuperable difficulties for the operationalization of transaction costs, since subjective costs are not reflected in market prices. For Rothbard (1997, 269): "if costs . . . are subjective, nonadditive, and noncomparable, then of course any concept of social costs, including transaction costs, becomes meaningless . . . And . . . even within each individual, costs are not objective or observable by any external observer." Moreover, that a large part of transaction costs are not reflected in market prices poses an additional problem regarding the issue of efficiency of institutions and organizations based on the neoclassical tenet of cost-benefit calculation. As Ankarloo (2002, 17) puts it, "how could the economic actors have interacted to create an efficient outcome, when they either did not have the information to do so (assuming that transaction costs were not visible as prices), or they were acting in the sphere where this information was not to be had (assuming that transaction costs were not *on* the market)?"

A partial solution to the problem of subjectivity is the possibility of quantifying transaction costs in an indirect way. Indeed, there are many empirical studies that attempt to measure transaction costs.[8] However, none of these works has succeeded in measuring the absolute level of transaction costs.[9] Furthermore, the limited measurement, via the use of various proxies in a reduced form of equations,[10] is applicable only at the micro-level of the business fields (e.g., Joskow 1991; Masten 1996). So, what they may at best compute is the cost of conducting transactions in one organizational or contractual form relative to others, and even then only with controversial results,[11] but they do not deal with the measurement of the level of transaction costs in the economy as a whole.

To the best of our knowledge, the only study that is supposed to measure the level of transaction costs on the grand scale of the overall economy is Wallis and North (1986). Ironically, however, the authors acknowledge from the outset that: "we have no quantitative measure of transaction costs because we do not have a clear, general theoretical concept of the costs of exchange" (1986, 96). So, by dividing the whole economy into two parts, transformation or production and transaction, and measuring the total values of resources used in the transaction sector, Wallis and North arbitrarily assert that they come up with the aggregate size of transaction costs in the economy (as percentage of GNP). Furthermore, to gain historical perspective, they calculated the GNP transaction percentages from 1870 up to 1970. Their analysis show that the transaction sector accounts for a significant part of the

economy and that this has grown from 25% to 40% over the years from 1870 to 1970 (121).

Thus, by associating transaction costs with the transaction sector, Wallis and North come up with what at face value, and according to their own predicament, seems like a contradictory conclusion. The more developed an economy is, and the more efficient its institutional environment, the larger the level of transaction costs. But this conclusion is inconsistent with North's (1990) general statement that economic development depends upon the existence of an efficient structure of property rights and institutions. The authors attempt to give an explanation for the relative growth of transaction costs by arguing that their increase is due to the expansion in the division of labor and to growing specialization. As the economy develops, the division of labor extends further, giving rise to more exchange, hence necessitating the diversion of more resources to transactions (Wallis and North 1986, 52). But if this is true, then there is an apparent discrepancy with the fundamental tenet of new institutional economics: if economic development brings about higher levels of transaction costs, as indeed Wallis and North's empirical research reveals subject to the reservations discussed above, in what sense can transaction costs be an explanation of the emergence of efficient institutions? In other words, if the logical chain is that efficient institutional environment leads to economic growth, which in turn is associated with a higher level of transactions, and hence a higher level of transactions costs, what is the transaction costs' explanatory value in explaining the existence of (efficient) institutions?

The conundrum can be resolved only if the increase in transaction costs due to the larger number of transactions is larger than the decrease in transaction costs brought about by more efficient institutions. In this case, the net result is an increase in overall transaction costs despite the presence of more efficient institutions. Such a conclusion, however, has to be shown explicitly rather than merely asserted. Given that Wallis and North do not even consider this case, it seems relatively safe to conclude that any endeavor to operationalize transaction costs is riddled with problems that stem from their "subjective" nature and their non-reflection in market prices.

Still, the most decisive critique against the idea of the operationalization of transaction costs comes from North and Wallis (1994) themselves. In their joint article, the authors not only turn against their previous work but they explicitly depart from the whole theoretical system of new institutional economics. From the outset the two authors reveal their intentions: "the rule of thumb proposition that institutions are chosen to minimize transaction costs is demonstrably false. Institutions are chosen to minimize total costs, the sum of transformation costs and transaction costs, given the level of output" (610). So, it logically follows that institutions are not solely created because of the presence of transaction costs. Consequently, North and Wallis proceed to bring into question the validity of the quantifiability of transaction costs by acknowledging that "many transaction costs are not observable" (612). This confession leads the authors to concede, as we have argued, that any endeavor to operationalize transaction costs is hopeless: "if we cannot

measure the absolute level of transaction costs associated with two types of contracts how can we tell that the transaction costs are higher in one contract than another? There is no obvious *empirical* reality to tell whether transaction costs are higher or lower under one contract than under another" (615). Therefore, they conclude that "under that assumption theories that propose an important role for institutional change in explaining the development of economies must necessarily be content with making assertions that can rarely be confirmed or falsified, since the economic variable they rely on, transaction costs, is unobservable" (622).

Hence, the blunt conclusion is that "*institutions do not exist to minimise transaction costs*" (North and Wallis 1994, 622, emphasis added). As is evident, this conclusion challenges the fundamental bedrock of transaction cost theory. Granted this, the whole theoretical corpus of new institutional economics sketched so far, has to be revised. Paradoxically, however, North (and most new institutional economists) continues to use transaction costs as an explanatory variable in their theory.[12]

The Origins of the Firm: A Critique of the Transaction Cost Approach

The Coase-Williamson Scenario of the Emergence of the Firm

In what follows, we are going to examine if the transaction cost rationale, given the existence of an institutional environment (e.g., property rights, a functioning market etc.), can explain the origins of organizations, most notably the firm. The necessary starting point is the analyses of Coase (1937) and Williamson (1975, 1985). The main premise on which their theory rests is that transaction cost economizing is the most important explanatory variable underlying the emergence and evolution of hierarchies (e.g., the firm). The pervasive logic is that high transaction costs associated with market functioning mean that rational actors will do their best to avoid these costs by organizing the production under a hierarchical structure involving lower transaction costs, hence the emergence of the firm. Thus, granted the transaction cost minimization principle, the very existence of the firm implies that the latter is a more efficient contractual form than market arrangements. Specifically, Coase argues that the main function of the firm is to minimize transaction costs by replacing market transactions with hierarchical organization of work.

Coming more than thirty years later, Williamson's (1975, 1985) works constitute the most comprehensive attempt to build upon Coase's theory of the firm. Williamson played a crucial role in establishing the "transaction cost economics" (TCE) line of investigation, where the emphasis is on the comparative costs incurred in "governing transactions." He also introduces the concept of transaction costs in dealing with the internal management of enterprises, focusing on the study of the internal organizational structure of the firm.

Starting, for "expositional convenience," from the theoretical assumption that "in the beginning there were markets" (1975, 20), Williamson creates a scheme similar to Coase's "market vs. hierarchy" type of analysis. Once more, markets and firms are seen as alternative modes of organizing the very same transactions and

whether a transaction occurs under an authority rule or through a market exchange is a matter of efficiency considerations: "the general approach to economic organization employed here can be summarized compactly as follows: (1) Markets and firms are alternative instruments for completing a related set of transactions; (2) whether a set of transactions ought to be executed across markets or within a firm depends on the relative efficiency of each mode" (1975, 8). The unit of analysis is the notion of transaction. Following Commons' ([1934] 1990) lead, Williamson (1985, 3) states that "the transaction is properly regarded as the basic unit of analysis."[13] Economic relations are, therefore, viewed in contractarian terms, as organized through the establishment of contracts. Consequently, for Williamson (1985, 20), the study of economic organizations of capitalism is conducted in terms of a contract theory, i.e., individuals establish "governance structures," which represent institutional modes of contacting to protect themselves from various hazards associated with exchange.

As is well known, Williamson's theory of the firm is based on two behavioral assumptions. The first draws on Simon's ([1947] 1961, xxiv) notion of "bounded rationality," according to which human behavior is "*intendedly* rational, but only *limitedly* so," because of the cognitive limits of the human mind to perform all the necessary calculations even if the relevant information is available. The second is "opportunism," which is extended beyond the hypothesis of pure selfishness, indicating "self-interested seeking with guile" (Williamson 1975, 26), i.e., agents try to satisfy their interest by using blatant forms of behavior, such as lying, stealing and cheating (Williamson 1985, 47).[14] In close relation with these two behavioral assumptions is Williamson's additional concept of asset specificity, which refers to a human or physical asset that is specialized to a single use or transaction (55).[15]

Given these conceptions, Williamson (1985, 17) proposes the general thrust of his analysis: "the economic institutions of capitalism have the main purpose and effect of economizing on transaction costs." In his view, efficiency and cost considerations are central to the emergence of the firm. Transaction costs create market failures, which, in turn, lead to an inefficient allocation of resources. Firms, then, are devices that internalize these failures, leading the whole economic system toward an efficient allocation of resources.[16] Williamson further indicates that organizational arrangements could be described along a spectrum, with "classical market" and "centralized hierarchical organization" at the two poles. Between these poles a variety of "mixed modes of firm and market organization" exist. The movement from market to hierarchy "mainly involves a comparative institutional assessment of discrete institutional alternatives," a tradeoff between alternative modes for organizing transactions (1985, 42).

What Coase and Williamson are trying to explain is the emergence and evolution of the *capitalist* firm and not just any form of organization devoted to the production of goods or services. Coase, in a reply to Hodgson (quoted in Hodgson 1999, 223, n. 3), makes clear that "the firm I was talking about was undoubtedly . . . the capitalist firm." The same applies to Williamson's (1985) work. As is already made explicit in the title of his book, his theory is focused on the explanation of the institutions of capitalism. Accordingly, the firm is viewed as a hierarchical

organization governed by the employment relation or else by the capitalist-worker relation. Hence, our critique also concentrates on the question of how this relationship emerges. In other words, on the question of whether the transaction costs concept can explain the origins of the hierarchical form of capitalist production.

The Problem of Alternatives

A first problem with Coase's and Williamson's expositions stems from the fact that they both view the market and the firm as alternative modes for organizing the same transactions. Such a conception, however, is problematic, since markets and firms constitute distinctive societal modes for the arrangement of exchange and production respectively, and thus the function of the former presupposes the existence of the latter. In his writings on political economy, Engels ([1877] 1976, 186) explicitly stresses the fact that "production and exchange are two different functions. Production may occur without exchange, but exchange — by the very fact that it is only an exchange of products — cannot occur without production."

A number of scholars have attempted to challenge the transaction costs idea of substitution between the market and the firm. Fourie (1989, 144-145) argues that "without firms that produce, there are no products to be transferred and allocated by market transactions . . . a market, unlike a firm, cannot produce. Therefore, market relations can only link firms (producing units). If this is true, markets and firms are not alternative modes of production, but are inherently and essentially dissimilar," and "therefore, although many firms in practice emerge in order to substitute for, or avoid, market transactions the emergence and existence of the firm as such — of all firms — cannot be explained by transactions cost considerations." As Dietrich (1994, 5) concludes, "in short, Coase's analysis is based on an inconsistency because of the view that firms and markets are alternative methods of coordinating production; any real development in the economics of the firm must remove this problem." Lazonick (1991, 169) invokes historical accounts to point out that "the history of twentieth century capitalist development shows . . . that as a dynamic process firms create markets, not vice versa. By definition Coase's approach casts the firm as a passive player that arises out of 'market failure', rather than 'organizational success'." In short, as Ankarloo and Palermo (2004, 421) put it, "logically, the firm precedes the market, not vice versa."

What should be stressed at this point is that this is a logical argument referring to the firm as such, or to the firm in general vis-á-vis the market at an abstract level. In other words the comparison is between the abstract firm and the abstract market (see also Mäki 2004, 328). This is *not* equivalent to the argument that there is not some degree of *actual* substitutability between firms and markets once both exist. What is questioned is whether the *existence* of firms as such can be explained by invoking transaction costs associated with an already existing market. To this question the answer is negative, for stated reasons. This does not deny the existence of a range of substitutability between doing things in house and contracting out as is evidenced by the process of vertical integration where the market is substituted by hierarchical

relations within a firm. This has also been of significance in the recent developments as, although historically firms brought things in house, more recently they have been outsourcing much more to the point where some firms simply write contracts organizing production that is all done by other entities. This had also been contemplated by Commons (1950) in his discussions of bargaining and managerial and rationing transactions.

Contrary to these challenges, Hodgson (1999, 202) suggests that the idea of substitution can be viable because a Coasean (or Williamsonian) firm is a multi-person entity, characterized by the employer-employee relation. Hence, Hodgson argues that it is reasonable to suppose that an alternative to a firm's organization is the organization of a market-coordinated system of self-employed production factors, in which transactions are directed through the function of the price mechanism.

Suppose for the moment that we accept Hodgson's argument. Then, the question is how are we going to explain the origin of the hierarchical employment relation in theoretical terms. How does this relation come about? A possible answer, consistent with Coase's and Williamson's line of reasoning, is that there is a consolidation of interests between the different production factors (i.e., capitalists and workers) driven by the incentive to minimize transaction costs and hence the hierarchy is the result of a voluntary agreement between capitalists and workers. According to this logic, workers have an incentive to be in a hierarchical form of production under the power of the entrepreneur because they are interested in minimizing transaction costs. But then a whole array of questions arise: What about the cost of losing one's freedom? Should this not be taken into account? And is this not in conflict with the employee's self-interest? On the other hand, does transaction cost minimization necessarily promote the employee's self-interest? And, if so, in what way? Can a worker be an employer? Who is to undertake the role of the entrepreneur and how is it decided who will become the employer? Why are the owners of capital not the employees of the firm? To answer these questions we have to turn again to Coase's original theory through a critical eye.

A Critique of Coase's Theory of the Firm: The Power to Employ

In a review article, Coase (1993, 64) acknowledges that "the main weakness of my [1937] article stems from the use of the employer-employee relationship as the archetype of the firm. It gives an incomplete picture of the nature of the firm." So, how does Coase view the nature of the firm in his original article?

According to Coase (1937, 54), the firm constitutes a hierarchical organization, based on the employer's (the entrepreneur in Coase's terminology) ability to direct resources (i.e., his employees) through power and coercion. Thus, markets differ from firms in that the former rely on a free work-relation between individuals, i.e., the employee is autonomous and self-directed, while the latter count on the authority of one party over the other, namely the employer over the laborer (39). The employment contract is, therefore, the result of a voluntary process, through which independent agents agree to work under the authority of a principal. The authority relation itself

thus becomes a voluntary relation between capitalists and workers. Coase goes so far as to argue that it is possible to have a hierarchical relation without any limits to the entrepreneur's supremacy. This is for Coase the case of a "voluntary slave" (39, n. 20)! The question then is why do rational agents submit to the power and command relations within the firm when they have the option to be independent contractors in the market? Why abolish their freedom and ascribe their labor power to their employer's compulsion, given the view that people tend, as Coase (38, n. 38) himself claims, to "desire (often the main aim in life of a worker) to be independent?"

Recently, Coase has attempted to answer this question by giving a more coherent depiction of his theory. So, it is instructive to quote him at length:

> Let us start by assuming that we have an economic system without firms, difficult though it may be to conceive of such a thing. All transactions are carried out as a result of contracts between factors, with the services to be provided to each other specified in the contract and without any direction involved. Contracts would also be entered into between factors and consumers for the sale of the product. . . . There are vast numbers of possible contractual arrangements but, absent firms, none would involve the direction of factors of production. In such a system the allocation of resources would respond directly to the structures of prices, but a great part of the available resources would be absorbed in making the arrangements for the contracts. . . . The position is completely changed if this theoretical scheme is modified to allow firms to be found. The organizers of a firm will be able to make contracts with factors of production under which they become subject to their direction if they can pay these factors sufficiently more than they would receive in the previously existing system, and they will be able to sell the resultant product if they can do so at a price lower than that at which it was sold under the previous system. In effect, this means that it will be profitable to organize a firm when its costs of operating . . . are less than the transaction costs that would be incurred in a complete market system (1993, 65-66).

It is clear that Coase is putting forward a logical, not a historical argument. He eschews historical concreteness for analytical tightness. In other words, in Coase's argument logic replaces history. Historically, however, it is impossible to explain the origins of the firm by appealing to the high transaction costs of the market starting from an imaginary state of affairs. As Milonakis and Fine (2007, 51) more generally argue, "simply asserting that an institution exists because it is a lower cost alternative to some other theoretical possibility is no explanation at all of the historical emergence of the specific institution. Even if the logic of transaction costs is accepted, this logic is valid in conditions in which the alternative forms considered had an existence before the decision to reject and substitute for them." Otherwise, it is quite legitimate to consider that our hypothetical starting point is invented as such to fit with our analytical objectives.

Another, and far more problematic, feature arises from the aforementioned context. Assume A is the owner of capital and B the laborer. In Coase's words, a firm (i.e., hierarchy) will arise and A will become an entrepreneur *only if* he can pay B sufficiently more than he would receive as a self-employed person. Only in this case B will choose to become an employee and thus abandon work freedom. Leaving aside for the moment the very precarious assumption that B will necessarily agree to abandon independence for a better pecuniary wage, there are two basic implications arising out of this argument. First, transaction costs enter the picture only in the decision of the potential entrepreneur, between paying the laborer to become subject to direction and to buy his/her services through the market, a decision that is conditioned by the prevalence of higher transaction costs associated with the market system as compared to commanding labor work. As regards the choice of the laborer, transaction costs are of no, or at least not the primary, concern since the choice depends mostly on the level of payment.

The second implication is that Coase does not perceive the emergence of the firm as founded on a specific form of economic power. This, in the first instance, is *the power to employ*. This oversight leads him to the misapprehension that although he does not deny power relations within the firm (for him the firm is indeed a hierarchy of command relations), he does not consider power as a possible cause of the emergence of the firm, since he does not consider the existence of power relations outside the firm. But not everyone can hire an employee at will.[17]

This form of power does not arise in a vacuum but is instead based on pre-determined socio-economic conditions. Before the appearance of both hierarchy and market organization, a certain level of division of labor and productivity must already have been reached. And for hierarchy in particular, a certain inequality of distribution and a certain level of accumulation of wealth is an additional prerequisite. These are, in general, the preliminary conditions for the existence of the power to employ.

But, if this is so, our starting point cannot be an "economic system without firms" together with the assumption that "in the beginning there were markets." We have to begin from the historical period where there was a low degree of social division of labor, the extent of the market was limited, and self-sufficiency of the individual family unit ruled production. But then, an additional problem arises. As Pitelis (1998, 1001) argues: "If we start from self-sufficiency, then we need to explain why social units, 'families' or individuals (decide) to exchange a world of no exchange (costs) for one with (positive costs of exchange) . . . We are back to square one; we need an explanation of exchange, production, production for exchange, markets, the firm, the Coasean firm, the whole lot!" If we accept, on the other hand, a given level of division of labor in society, then the emergence of the hierarchy cannot be viewed in relation to the market (since hierarchical forms predate the emergence of organized markets, North 1981, 41-2), but rather as an alternative to other modes of organizing the production such as family, self-employed production units, etc. What is more, what we are referring to here is hierarchical forms of production in general and not the capitalist firm in particular as is the case with Coase and Williamson. Hence, the very idea of substitution between firm and market as a way of explaining the

emergence of hierarchical forms of organization of production is brought into question.

Thus, the very contractarian logic of the emergence of the firm becomes questionable. The view that hierarchical relations of production are the result of purely voluntary interactions requires a prearranged set of socio-economic conditions that give the owners of capital the power to employ, which *are not* reducible to the intentions or agreements of individuals. Generally, as Durkheim ([1893] 1984, 158) argues, every contract itself depends on factors other than full, rational calculation: "For in a contract not everything is contractual."[18] The contract is embedded in a social context, it has a pre-contractual basis that is the existing social structure with its concomitant distribution of power and wealth. Thus, although a contract is an expression of will, what underpins the entire contractual situation is the existing social relations and the distribution of power embedded in them in the first place, not pure individual will. Hence, it follows that the employment relation, being of necessity a contract in the Coasean sense, presupposes an existing structure of social relations. In other words, it presupposes a set of social relations whereby person A has the power, through a contract, to employ person B. The contract as such is a social institution precisely because individual contracts can be and are enforced by agencies of social power that are not parties to them. Thus, the contractarian logic becomes too narrow a theoretical context to be able to explain fully the emergence of hierarchical forms of production, the capitalist firm included.

The conclusion is that even in Coase's own terms the notion of power, in the form of the power to employ, exists both inside and outside the firm. Coase sets this aside and is thus unable to explain how this power came about. This oversight generates a number of difficulties regarding the transaction costs rationale of the emergence of the firm, and hence severely limits the explanatory power of his theory.

A Critique of Williamson's Theory of the Firm: Dr. Pangloss Versus Darwin

Besides the vagueness in the definition of his concepts in presenting his theory discussed earlier, Williamson never makes clear whether his theory of the emergence of firms should be interpreted in an "intentionalist design" manner or in an "evolutionary" way. He seems undecided whether his fundamental belief is in the power of rational choice or in the natural selection metaphor. Thus, in some cases he seems to favor an explanation of deliberate design according to which the firm is supposed to emerge as the result of conscious choice of the individuals calculating transaction costs, while, in other cases, the emergence of the firm is explained as an unintended outcome on the grounds of efficiency consequences. However, both of these explanations are seriously flawed, both analytically and in terms of their underlying assumptions.

Regarding the first explanation, an important theoretical contradiction arises between Williamson's assumption of bounded rationality and his main conclusion, namely that the emergence and evolution of organizational structures are the result of the pursuit of economic efficiency by individuals. On the one hand, individuals are

supposed to be boundedly rational but, on the other hand, their sub-optimal decisions are supposed to design optimal organizational configurations. As Dow (1987, 27) argues, the intentionality principle is ruled out because "if agents cannot cope with contracts featuring complex contingencies . . . it is doubtful that they can select in advance an efficient decision making procedure to use in adapting to future contingencies." Likewise, Hodgson (1999, 199-200) also contends that "omniscient calculations" from agents cannot simultaneously co-exist with the concept of bounded rationality.

Williamson (1987, 618) attempts to respond to these critiques by asserting that his definition of bounded rationality "contemplates intentionality within *limits*." Therefore, according to Williamson (1991, 174), rational agents can be at the same time farsighted, calculating and maximizing. But, then as Vromen (1995, 59) notices, "Williamson's boundedly rational individuals do not seem to be so limited after all!" Thus, the assumption of bounded rationality seems to come into conflict in principle with any endeavor to view the emergence of the efficient organizational arrangements, including the firm, as the result of deliberate design by individuals.

The only possible alternative within Williamson's framework is to conceive the emergence of organizations as the unintended result of individual actions. That is, to assume that a form of natural selection is in progress, and hence transaction costs via competition are the selection principles that assure that the most efficient organizations will emerge and persist. Indeed, Williamson (1985, 22-3) seems at one point to make reference to competitive pressures of selection and to evolutionary explanations of the organization of firms: "the [transaction cost] argument relies in a general, background way on the efficacy of competition to perform a sort between more and less efficient modes and to shift resources in favor of the former . . . This intuition would nevertheless benefit from a more fully developed theory of selection process." Therefore, the observed organizational structures are explained by their "beneficial consequences," that is their ability to economize on transaction costs. In this vein, organizations are not explained as the result of a rational plan, intention or design, but as the final result of some evolutionary process, where the notion of "efficiency" is nothing other than an economic analogy for biological "fitness" (Langlois 1986; see also Dow 1987 and Vromen 1995, 56-62).

However, such a form of explanation is inherently incapable of explaining the emergence of the firm for two reasons. The first is that the argument becomes purely functionalist in nature. As Granovetter (1985) argues, the root of the problem is the implicit functional argument in Williamson's assumption that "whatever organization form is most efficient will be the one observed" (503), which implies a "Panglossian view" according to which all the existing organizational arrangements are the best of all possible ones.[19] Reference to the function of an institution or organization, however, does not suffice, in and of itself, to explain its origin. Reference to the efficient function of an organization (e.g., firm) can at best be an explanation of its persistence and not of its emergence. To deal with its origin, the explanation has to specify the historical process by which this organization has come into being.

Furthermore, as already mentioned, natural selection processes do not necessarily give rise to efficient results. As Hodgson (1993) argues, recent work in evolutionary biology shows that evolution is not identical with progress to higher forms of organization. This means that natural selection does not necessarily lead to survival, and survival is not necessarily an indication of fitness. Therefore, contrary to Williamson, the evolutionary analogy does not *a priori* serve as an argument for the notion that competition leads to efficient forms of organizations (see also North, 1981; 1995, 7). In particular, the mere existence of competition does not ensure that only efficient institutions or organizations will emerge and survive. The effect of competition depends critically on the exact nature and circumstances that surround competition itself (Rutherford 1994, 170). For instance, there may be examples where market conditions do not allow for new entrants. Consequently, a market competitive process does not necessarily operate to generate efficient results.

The second reason is that the idea of alternatives makes inapplicable any suggestion of the natural selection analogy as a way of explaining the origins of the firm. Generally, the economic metaphors for the natural environment and the selection principle in biology, are the market and the notion of competition respectively. Thus, economic selection is supposed to operate at the level where firms compete (struggle in Darwinian language) within the market context and the more efficient are supposed to survive (Rutherford 1994, 82, 162). The market is the social environment, the context, in which the selection process operates. However, as already indicated, Williamson (like Coase) treats markets and firms as alternative means of organizing economic transactions. This implies that in Williamson's analogy the competitive pressures of selection operate between market and firms and the latter emerge as a more efficient (in terms of transaction costs) form of organizing economic transactions. However, the existence of competition between market and firms presupposes the existence of both. As such, the selection process through competition can only explain the persistence of the firm as a form of organizing production vis á vis the market and not its actual emergence. At the same time, in Williamson's conception, the market is no longer the social environment where the selection process operates. Instead it becomes one of the actors being itself subject to the selection process. In other words, in such a formulation the market turns out to be one of the objects of selection rather than providing the (social) context of the selection process.

But if this is so, then for the selection principle to be applicable, the origins of the market must, also, be explained and a meta-market environment has to be invented. This is, however, a decisive problem in Williamson's framework. On the one hand, the market is the primordial condition, an "act of God" (Dugger 1992, 89), or a "natural category" (Ankarloo and Palermo 2004, 421), from which all other organizations are supposed to be derived. And, on the other hand, the market is also one of the actors subject to the selection process. Both, however, cannot be true at the same time. The market is assumed to preexist and hence its existence is taken as a given and as such cannot be explained from within the theoretical model. As is evident, the problematic nature of the natural selection analogy as a way of explaining

the origins of the firm stems directly from the idea of substitution between an organization, the firm, and the market. As Khalil (1995, 454) argues, "the theory of institutions cannot fulfill the role of the theory of organizations." Yet, and equally important, is the problem of the social environment where the selection process takes place. If it is not the market context, then of what does this social context consist?

Williamson (2000, 596-600), in later work, draws a four-level classification scheme. At the first level stand informal institutions, such as religion, social customs and norms. These are slow to change, over the timescale of centuries or millennia. At the second level is the institutional environment, consisting of formal rules, such as property rights, constitutions and law. The timescale of evolution of these is measured in decades. The play of the game occurs at the third level and this includes the choice of appropriate modes of governance, i.e., organizations, for each type of transaction, the aim being the economizing of transaction costs. Finally, the fourth and lowest level contains economic activities such as production, employment, and market equilibration.

According to Williamson (2000, 608), transaction cost economics "is predominantly concerned with Level 2 and 3 of the four levels of social analysis . . ." In other words, the game is now played above the level of the market. The latter is now relegated from being the primordial condition upon which the existence and evolution of other institutions and organizations can be derived, to the fourth and lowest level of analysis, below the level(s) of transaction cost analysis, being itself based on a whole set of institutions (formal and informal) and governance structures.

In this version, transaction cost theory focuses on economic organizations, such as firms, and on transactions within and across organizations. Williamson (2000, 596) recognizes both the influence of the institutional environment on governance structures and a feedback effect of governance structures upon the institutional environment. But he claims that these latter effects are "of the second order" and beyond the scope of a transaction cost theory. In such a framework, higher levels impose constraints on the levels below. As a consequence, the institutional framework limits the scope of design of organizations.

Thus, a more consistent view of the origins of the firm within this framework would not be through a comparison between markets and firms but between firms and other organizational structures. It is notable that whenever Williamson tries to explain the emergence of a specific organizational form, the comparative analysis is not between the market contracting and the specific hierarchical structure but, instead, between alternative types of hierarchies. Such instances include Williamson's attempts to explain the historical transition from the putting-out system to the factory (1980), the emergence of M-form Modern Corporation replacing the U-form, and the emergence of conglomerates and multinational firms (1985). However, the difference with all these applications is that they presuppose the existence of the (capitalist) firm as such, and deal instead with the historical evolution of this hierarchical structure and not with its origins.

The conclusion is that neither a deliberate design explanation nor a natural selection analogy are applicable in Williamson's theoretical framework. The first

conflicts with the bounded rationality assumption, while the latter cannot explain the emergence of the firm given its functionalist nature and that to compete with the market or other hierarchical structures, it has to be in existence already. Thus, Williamson's analysis cannot in principle explain the origins of the firm as such, as a hierarchical form of organizing production, as opposed to the market contractual form. Rather, Williamson's framework is used to elucidate the evolution of hierarchical organizations already in existence, whose actual emergence remains largely unexplained.

Concluding Remarks

In this article, we have outlined the main tenets of the new institutional transaction cost theory. Starting from this general theoretical viewpoint and ending up with the concrete problem of efficiency considerations, we pinpointed several theoretical problems associated with the explanation of the emergence of institutions and organizations in transaction cost terms. The conclusion is that transaction costs are unable to provide a sufficient grounding for the explanation of institutional emergence given its static, ahistorical and universalistic nature.

Given the static nature of this theoretical framework, the dynamic process by which new social relations are created and utilized, and the question of how these social relations affect the creation of institutions and organizations, are left largely unexamined. The transaction cost reasoning is only a comparative static exercise, which is hard to reconcile with the dynamics of institutional formation and change. As Langlois (1992) has argued, transaction cost economics can at most explain short-run phenomena, but is unable to come to terms with long-run dynamic processes of learning and of the development of capabilities. The time dimension is totally lacking. "The reigning transaction-cost theories of vertical integration provide illuminating snapshots of possible institutional responses to a momentary situation. But they do not place those responses in the context of the passage of time. They are short-run theories that . . . have no long-run correlative" (105). More generally, an essentially static model is used to capture the whys and hows of an inherently dynamic historical process, an exercise that is doomed to fail.

Moreover, transaction cost theory provides a timeless and ahistorical framework. The transaction cost concept is ahistorical by construction. Its account of how more efficient institutions and governance structures evolve in response to new cost-benefit possibilities is an example of ahistorical functionalism (Mäki 2004, 335-6). Such a concept cannot adequately address the particular forms that institutional arrangements have taken historically. Thus, the transaction cost rationale is not consistent with a historical, evolutionary mode of explanation and does little to advance our understanding of the historical formation and development of institutions and organizations.

Last, but not least, the transaction cost logic also involves an implicit "universalism." In other words, it represents a framework where "one size fits all," and where the explanation of all institutions and organizations that have appeared in

history, can be translated into transaction cost terms, without regard to the specific historical circumstances. In this vein, the transaction cost concept attempts to explain everything thus ultimately risking to become a series of logical deductions that do not explain anything at all.

Notes

1. And first female recipient. See "Review Symposium: Beyond the Tragedy of the Commons," in *Perspectives on Politics* 8, 2, 2010.
2. For the definitions of the terms used see the following section.
3. Klaes (2000a) traces the pre-history of the concept in the late nineteenth century notion of friction that was used in economic discourse to refer to aspects of the institutional context (211). In the twentieth century he identifies several different transaction cost traditions and claims that the term made its first appearance in the field of post-war monetary economics associated with Marshack and Baumol's and Tobin's inventory model. Other traditions include general equilibrium theorists such as Niehams, Foley, Hahn, Kurtz, Arrow and Debreu, the Coase-Williamson transaction cost economics and the Alchian-Demsetz-Cheung school based at UCLA that had a lasting influence on North's work (Klaes 2000a; 2000b, 569-576).
4. "It was less expensive for the lord to employ labor dues owed to him to grow the goods he desired than to negotiate with his serfs every time he wished to consume different goods during the next season" (North 1981, 129).
5. According to Davis and North (1971, 6), the institutional framework is the "set of fundamental political, social, and legal ground rules that establishes the basis for production, exchange and distribution." Rules governing elections, property rights and the rights of contracts are examples of the ground rules.
6. Williamson (2000, 596-600), on the basis of this distinction, draws a four-level classification scheme that includes informal institutions at the first level and the institutional environment consisting of formal rules at the second level. The third level includes the choice of appropriate modes of governance, while the fourth and lowest level contains economic activities such as production, employment, and market equilibration. See the section titled "A Critique of Williamson's Theory of the Firm: Between Dr. Pangloss and Darwin."
7. This is also North's position on this matter. See the exchange between himself and Hodgson in Hodgson (2006, 19-21). It should be noted here, that organizations play different roles in North's and Williamson's theoretical approaches. In Williamson they are part of the *explenanda*, hence the interest in their internal structure whereas in North they are part of the *explenantia* in his quest for the causes of long-run change in economic systems. For Williamson's position see also the section titled "A Critique of Williamson's Theory of the Firm: Between Dr. Pangloss and Darwin."
8. For an overview of the bulk of empirical research of transaction cost economics see Shelanski and Klein (1995) and Vannoni (2002).
9. Researchers acknowledge that that there are transaction costs that can be difficult to observe (e.g., bargaining costs) while, at the same time, other transacting dimensions such as asset specificity, uncertainty and frequency are often hard to quantify (Shelanski and Klein 1995, 339; Masten 1996, 45; David and Han 2004).
10. See for example Demsetz (1968) who measures transaction costs as the difference between the prices paid by the buyer and prices received by the seller. Furubotn and Richter (1998, 56) model transaction costs in a simple analogy to the orthodox production function.
11. For instance, Chapman and Buckley (1997, 236-236) conclude that executive managers are not familiar with the concept of transaction cost at all. Further, Carter and Hodgson (2006) find that the empirical evidence, derived from a significant number of empirical studies, does not decisively support Williamson's transaction cost theory.
12. North (1998), for instance, extends transaction costs theory to explain the evolution of political institutions.

13. Hodgson (1999, 218-219), however, stresses correctly that Williamson's use of transaction, as the basic unit of analysis, lies at the very opposite of Commons' view. While Commons adopts a structural analysis, Williamson treats the notion of transaction as a "given, atomistic and individualistic concept of thought."
14. It is, therefore, the simultaneous existence of bounded rationality and opportunism that causes the costs of transacting and makes each contract unavoidably incomplete (Williamson 1985, 30-32). Otherwise, complete contracts are feasible if it is supposed that one of the two behavioral attitudes is absent: if we assume that individuals are perfectly rational then the assumption of opportunism is empty of meaning, since agents could foresee and deal with any potential opportunistic behavior. On the other hand, if we treat human beings as non-opportunistic, there would be no reason for deviation from the initial terms of the contract. But with the simultaneous existence of these attitudes the aim should be to "*organize transactions so as to economize on bounded rationality while simultaneously safeguarding them against the hazards of opportunism*" (1985, 32).
15. Williamson (1985, 52-61) also discerns two additional dimensions that characterize each transaction: uncertainty and frequency. He argues, however, that asset specificity is the most important.
16. Recently, Williamson (1990, 67) has argued that economizing on the sum of production costs and transaction costs is a more general statement of his hypothesis. However, as Furubotn and Richter (1991, 8) observe, "this distinction between transaction costs and production costs can be particularly hard to make." According to Dietrich (1994, 28) it is very doubtful if a theory can simultaneously adopt these two different concepts, since transaction costs are relying on the persistence of bounded rationality, a term totally ignored in neoclassical production cost theory.
17. This is a widely held view within new institutional economics and can be described through the power/efficiency dichotomy. That is, the emergence of capitalist hierarchies cannot be based on power considerations, since it is in the interests of rational workers themselves to establish hierarchical forms of production, and hence efficiency is a more appropriate tool to explain the existence of the firm (e.g., Alchian and Demsetz 1972; Williamson 1985, ch. 9). In his critical appraisal Palermo (2000, 589) points out that, "[i]f two parties voluntarily agree to establish a (hierarchical) work relation, one in the position of *worker* and the other in the position of *boss*, it is because their respective constraints make these positions the best option for both of them: rational agents do not choose to be workers if they can be bosses (by the way, the next-best alternative for workers is not command and direction, but unemployment)." However, the situation is a little different in Coase's formulation, because workers do have the option of market contracting.
18. Durkheim ([1893] 1984) puts forward this argument in order to stress the point that the obligatory character of contracts goes beyond the decisions agreed upon by the parties to the contract.
19. In accord with Granovetter, Dow (1987) also accuses Williamson for using a Panglossian language. Williamson (1987, 623) replies that his analysis does not account for the "survival of the fittest," but instead implies a weak form of selectionism, which assures that only the "fitter" organization in relation to the competing one will emerge. Thus, the discussion over Panglossianism is a "red herring." Nevertheless, this line of reasoning does not overcome the problem of functionalism.

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