

Transaction Costs, History of

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As a concept, transaction costs are used in numerous ways in economics, from simply referring to the fees charged by a financial broker to a much broader concept encompassing the comparative efficiency of alternative modes of resource allocation and economic coordination.

At the most general level, transaction costs are the costs that arise beyond the point of production of a good to effect its allocation. Beyond this, the literature is fragmented regarding the various facets of the concept. The distinction between production and allocation may not be meaningful in all instances. Transaction costs may or may not include transport costs, may or may not just refer to market exchange, may or may not be reduced to a single alternative category such as information costs or the cost of time. Some authors measure transaction costs in monetary terms, others as departures from first-best outcomes, or just on the basis of qualitative comparative rankings of feasible institutional alternatives. Indeed, whether transaction costs should be regarded as a cost at all has been subject to controversy, too. Hence, the term can be and has been applied in virtually every conceivable economic and social scientific context. Its wide uptake has been attributed to the systematic ambiguity inherent in its unqualified application (Klaes, 2001), and its usefulness for serious analysis has been questioned on these grounds (e.g. Dixit, 1996: 35).

Although often used as a catch-all term, thinking in transaction cost terms has nevertheless yielded a rich array of models and analytical frameworks that have helped redefine how economists look at economic exchange and coordination. Circumspect definition specific to the particular context in which one seeks to use the concept should help avoiding semantic pitfalls. Furthermore, not only are systematically ambiguous notions common in economics (Clower, 1995), they actually serve a distinct and valuable purpose in the coordination of research (Klaes,

2006). A sceptical stance towards the aggregate ambiguity of the transaction cost concept does thus not necessarily amount to a criticism of particular applications of the term, although a certain tendency can be observed outside of what has become known as a ‘new’ institutional economics (see below) towards alternative expressions like ‘friction’ (e.g. Luttmer, 1996) or ‘link costs’ (e.g. Kranton and Minehart, 2001: 492).

Monetary, relational and institutional interpretations

The various interpretations of the transaction cost concept have traditionally been classified into two general categories, juxtaposing a narrow interpretation typically associated and compatible with a ‘neoclassical’ tradition, and a broader and more institutionally minded interpretation, located in the theory of the firm and the economics of property rights, and calling for more or less radical revisions of this tradition (Coase, 1972; cf. Dahlman, 1979; Allen, 2000). While careful analysis allows one to distinguish between more than two categorically different kinds of transaction costs, the range of extant applications of the concept is best thought of as forming a spectrum of broadening scope: i) narrow interpretations typical of the monetary and general equilibrium literature; ii) relational interpretations that are based on particular market micro-structural conceptions or models of how economic agents interact with each other beyond the traditional economic dimensions of price and quantity signals; iii) institutional interpretations, which formulate transaction costs as part of a more general analysis of economic institutions, including market and non-market forms of coordination. Institutional interpretations of transaction costs are the result of applying relational interpretations of transaction costs – originally defined on the basis of exchange within markets – to non-market settings such as networks, firms or clans, with the aim of expressing the comparative economic performance of alternative institutional solutions to the coordination problem in transaction cost terms.

In monetary conceptions, transaction costs are the direct costs that an economic agent incurs when engaging in a market transaction, leaving most or all of the micro-structural details of the exchange context unspecified. At the most basic level, these costs are expressed as a reduction in the value of a transaction, technically equivalent with a transaction tax. In more developed monetary transaction costs interpretations notions, these costs are conceptualised as the direct monetary costs incurred when

engaging in a particular market transaction, resulting from the use of intermediary and adjunct services (brokerage, transport).

Compared to monetary transaction costs, relational transaction cost interpretations rely on more explicit conceptualisation of how economic agents interact with one another when they engage in market exchange. To some extent, one may subsume economic contract theory under this part of the transaction cost literature, although explicit transaction cost conceptions as such play at best a subordinate role in those approaches (e.g. Grossman and Hart, 1986; Holmstrom and Milgrom, 1994).

A relational interpretation of transaction costs has played a more pronounced role in Coase's (1937; 1960) contributions to the theory of the firm and the economics of property rights. While he himself referred to 'marketing costs' or the 'costs of market transactions' in those seminal papers and did not embrace the term 'transaction costs' until relatively late (Coase, 1974: 494), his approach to defining these costs heavily influenced the conceptualisation of transaction costs in what has become known as a 'new' institutional economics (Eggertsson, 1990; Furubotn and Richter, 2005; Ménard and Shirley, 2005), a movement best thought of as part of a renewed interest in the institutionalist traditions in economics during the last decade of the 20th century (Rutherford, 1994). Faced with the considerable theoretical challenge of providing a comprehensive micro-structural theory of exchange, a frequent strategy in this literature has been to follow Coase in decomposing relational transaction costs heuristically according to the different steps involved in concluding a market transaction. While classifications of individual authors differ, most heuristics can be accommodated within a framework that distinguishes between: i) the costs of locating and attracting potential trading partners and of pre-sale inspection; ii) contracting and fulfilment costs; iii) policing and enforcement costs.

In most instances, relational conceptions of transaction costs still proceed from a contractual (in the legal sense) and therefore market-based understanding of 'transaction'. Institutional interpretations, by contrast, further broadened the scope of the transaction cost notion by applying it not just to contractual settings but also to alternative forms of economic coordination. The distinguishing characteristic of this third interpretation of transaction costs is not the comparative character of the underlying analysis, since both monetary and relational conceptions allow comparative assessments of alternative solutions to a given coordination problem. Rather, the difference results from the endeavour of applying Coase's 'marketing'

costs to non-market settings, comparing market coordination alongside non-market forms within a given array of alternative institutional forms. However they are defined on the micro-structural level, once they are institutionally interpreted transaction costs therefore reflect the costs of economic coordination more generally.

Some economists regard the transaction cost concept as inseparably wedded to a framework of analysis that attempts to reduce institutional features of the economy to the core neoclassical notion of cost, thereby failing to develop conceptual tools more attuned to the complexities of economic institutions. In the eyes of these critics, building an analysis of the institutional features of economic coordination on a concept that invites its own minimisation undermines the very starting point of any seriously institutional approach to economics since a world of zero transaction costs would constitute an institutional void. In other words, one may argue that an important aspect of transaction costs is their reflection of investment in institutional capital. In a way, this point mirrors the various critiques of reducing labour to an economic cost. It has had limited impact on those who, as a new breed of institutional economists, have sought to reform and expand economic analysis in the name of the economics of property rights, the field of law and economics, transaction cost economics, the theory of the firm, the economics of organisation, and the study of long-term economic change (see Coase, 1988; Williamson, 2000; Alchian, 1991; Demsetz, 1988; North, 1990; Langlois, 2002).

Origins

The basic insight that underlies the transaction cost concept, which one finds embodied in the pre-historical emergence of generally accepted media of exchange, is probably as old as human reflection on economic issues itself. It is thus not difficult to identify numerous precursors to the notion of transaction costs as one finds it presently developed in the economic literature, in particular in its monetary branches. When Aristotle (1932:13-4) wrote on the origin of money for example, he observed that once villages grew and combined into city-states they would require a medium of exchange that was portable and easy to handle. He also noted that impressing a stamp on a piece of metal would help avoiding repeat measurement of its embodied value.

Aristotle's insights have been reiterated time and again whenever subsequent economic writers discussed the origin of money. Crucial steps for the further entrenchment of the concept were the depiction of the various impediments to

exchange as an economic cost, followed by the crystallisation of the term 'transaction(s) costs' itself (probably Scitovsky, 1940: 307; cf. Hardt, 2006), which entered the economic literature from the financial markets where it was in popular usage in the 1930s (anon., 1936).

Towards the end of the nineteenth century, economists tended to address the impediments to exchange as 'frictions' in the economic system (cf. Davidson, 1896). On the metaphorical level, this interpretation resulted from a general post-Enlightenment tendency to look at the economic system in mechanistic terms, illustrated by recurring metaphors such as Hume's (1752/1987: II:iii:1) 'wheels of trade' or Mill's (1848/1909: III:xxvi:1) 'machinery of exchange'. One should not discount the economic cost of the physical friction that a medium of exchange is exposed to either (Say, 1803/1855: I.XXI.XI.1-3).

A prominent early attempt to describe economic friction as a cost can be found in Menger (1871: 170-71), who notes that every transaction requires economic sacrifices. At the very minimum, these consist of a loss of time, but may also include transport and storage costs, sales costs, taxes, commissions, communication costs, and more generally all the costs associated with intermediaries and the monetary system. While clearly describing these various sacrifices in opportunity cost terms, Menger does not address them explicitly as a cost and he refers to them merely to define the boundary conditions of the validity of his theory of exchange.

It was not until Marx's (1893/1953: 123-46) analysis of *Zirkulationskosten*, as the 'costs of circulation' that result from the continuous exchange of money into goods and back into money again, that one finds an extended conceptual analysis of the costs associated with exchange. Marx regarded these costs as '*faux frais*', costs which are necessary to sustain the circulation of capital but are nevertheless unproductive in that they do not contribute to the creation of value. 'Pure circulation costs', the most important component of circulation cost, refers to bargaining costs, accounting costs, and, following in Say's footsteps, the costs resulting from the wear and tear of the medium of exchange. One may note in passing that Marx's discussion of the costs of exchange in terms of the classical notion of unproductive labour provides one of the most immediate links between classical political economy and modern debates on for example the relationship between production, transaction costs, and the question whether the latter are best regarded as a cost in the first instance (e.g. Barzel, 1985; Goldberg, 1985).

Conceptual development

In the 1930s, a number of authors were exploring the implications of ‘selling’ or ‘marketing’ costs as part of the growing literature on advertising, monopolistic competition and the theory of the firm (Braithwaite, 1928; Chamberlin, 1933/1948; Coase, 1937). While the theory of the firm experienced a strong revival three decades later within the emerging new institutional economics (Malmgren, 1961; Cheung, 1969; Williamson, 1970; Alchian and Demsetz, 1972), it was Hicks's (1935) explanation of the holding of cash balances on the basis of the costs one incurs when converting assets into cash (Klaes, 2000) that provided the strongest immediate impetus to the coining and further differentiation of ‘transaction costs’, notably via the post-war neo-Keynesian literature, its inventory approach to the transactions demand for money, and the general question of cash balances in general equilibrium theory (Makower and Marschak, 1938; Marschak, 1950; Baumol, 1952; Tobin, 1956; Patinkin, 1965; Foley, 1970; cf. Ulph and Ulph, 1975).

The monetary economics literature proceeded largely on the basis of a narrow price-based understanding of transaction costs, although comparative issues that pointed towards broader interpretations became a pressing technical concern in its mature phase (e.g. Hahn, 1973; see below). Arrow (Arrow, 1965; 1969/1983) provided a crucial conceptual link between the mature general equilibrium literature on transaction costs, and the emerging literature in the new institutional economics, by moving from a monetary to a comparative institutional interpretation of transaction costs. By contrast, the economics of property rights and the emerging field of law and economics developed an increasing variety of relational transaction cost interpretations, typically expressed in contractual terms (Coase, 1960; Alchian, 1965/1977; Demsetz, 1967; Calabresi, 1968; Posner, 1972; Macneil, 1981). The overall thrust of the new institutional economics, notably in economic history (Davis and North, 1970; North, 1985) and through the formulation of a 'transaction cost economics' by Williamson (1975; 1985), has however been the spelling out of the details of a comprehensive institutional analysis of institutional arrangements on the basis of comparative institutional interpretations of transaction costs (s. a. Aoki, 2001; Langlois, 2002; Greif, 2006).

Empirical studies even on the basis of monetary transaction costs, which one might have expected to be more amenable to direct measurement than broader

interpretations, have displayed considerable divergence regarding the level of observed transaction costs. Once one moves beyond narrow monetary transaction cost conceptions, for example to account for observed bid-ask spreads or for violations of the law of one price, one is forced to delimit those dimensions of transaction costs that are not empirically accessible as such and have therefore to be inferred indirectly. In the absence of a commonly agreed empirical definition of transaction costs this will inevitably lead to results that are sensitive to the particular definition that one employs (Gould and Galai, 1974; Fama, 1991).

Alternative approaches, largely found in the comparative institutional transaction cost literature, have included attempts to infer macroeconomic transaction costs on the basis of the size of the transaction sector of an economy (Wallis and North, 1986), or to derive proxy measures for transaction costs on the basis of transaction characteristics such as asset specificity (Williamson, 1991; Nooteboom, 1993). The irony of sectoral measures is that economies with less well developed transaction sectors appear to exhibit lower levels of transaction costs if those costs are measured in terms of sector size, whereas micro-structurally, those economies in fact suffer from higher levels of transaction costs due to significant barriers to smooth exchange and coordination of economic activity. Proxy measures, in turn, are at risk of running into difficulty once they seek to embrace institutional transaction cost interpretations, because they have to proceed on the assumption that transactions can be defined such that there is a core to them that remains unaffected across alternative institutional settings. Once one moves to non-market forms of economic coordination, this may become problematic (Masten, 1996), although the modularity literature has begun addressing this issue (Langlois, 2006).

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