

An Analysis of Entry Barriers from a Property rights Perspective

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Abstract

We use Coasian property rights theory (Coase 1960, Eggertson, 1980; Barzel, 1994, 1997) to examine the transaction cost foundations of the creation and exercise of market power. In particular, we examine entry barriers as a mechanism to protect incumbents' property rights to the value created in transactions with customers and suppliers. We discuss how transaction costs influence the effectiveness of entry barriers as means of positioning against market forces in an industry. In the market power, perspective entry barriers deter entry when entrants can cover their costs at the post entry prices. Often the effectiveness of entry barriers depends on the post-entry residual demand in the industry. From a property rights perspective this is a much too narrow focus since the analysis neglects the incentives that buyers and suppliers have to take action against their losses caused by entry barriers. Buyers' and suppliers' action depend the transaction cost they face in defending their property rights to the value created in transactions. We argue that a broad conception of property rights and transaction costs allows

us to understand the impact of recent disruptive business model innovations such as Airbnb in the hotel industry and Uber in the taxicab industry. Moreover, we derive conclusions on competitive strategy that are more precise using property rights and transaction costs.

Introduction

Competitive strategy, in the market power perspective, is about how firms build and sustain privileged market positions (Porter, 1980; Shapiro, 1989). This involves investments in defensive acts of building entry barriers to positioning the firm against market forces as well as offensive acts such as pricing strategies, signaling and control of information to keep rivals off balance (Tirole, 1988; Shapiro, 1989; Ghemawat, 1991, 1997; MacDonald et al., 2004). If successful, firms acquire a privileged market position and appropriate economic profit. In this paper, we point out that a broad conception of property rights and transaction costs allows us to derive new conclusions on competitive strategy that rely on market power. In particular, we examine the way in which property rights and transaction costs influence the effectiveness of entry barriers as means of positioning against market forces in an industry.

The market power perspective on entry barriers stems from traditional industrial economics where entry barriers are an important factor in explaining persistently high profit rates in some industries. The discussion of entry barriers exhibits some difference on the definition of the construct. Bain (1956) considers entry barriers to be present to “the extent to which, in the long run, established firms can elevate their selling prices above the minimal average costs of production and distribution, without inducing potential entrants to enter the industry” (p.252) whereas Stigler (1968) defines barriers as “a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry” (p.9). None of these definitions directly points to property rights as the underlying foundation for entry barriers. However, the notion of property rights is indeed present in the market power perspective on strategy but in the discussions on entry barriers

property rights issues are mainly limited to the use of intellectual property rights as a means of creating entry barriers¹.

Proponents of the economics of property rights (RPR) extend the notion of property rights extends well beyond intellectual property rights. In fact, economics of property rights is simply an extension and generalization of neoclassical economics (Alchian, 1965; Eggertson, 1990; Furubotn, 1991). The extension and generalization come about by systematically addressing property rights and transaction costs issues in the context of maximizing behaviors and a tendency for markets to clear (Eggertson, 1990). In the Economics of Property rights perspective a distinction is made between legal rights and economic rights (Alchian, 1965, Barzel, 1997). Property rights are a resource owner's *de facto* rights to exercise choices over resources such as goods and services ("use rights") and derive income from these choices ("income rights") Alchian, 1965). Such rights exist even in the absence of the state, legal system, courts, etc., in fact, even under wholly anarchical conditions (Umbeck, 1981). Physical force, credible threats and/or strong social norms ensure *de facto* control over the use of and the income from a resource. Although property rights can exist in a legal vacuum, in actuality they often have legal counterparts (Barzel, 1997).

One important dimension of property rights is the rights firms' have to derive income from their deployment of resources in productive uses. From a property rights perspective, entry barriers protect incumbent firms' *de facto* property rights to income by excluding potential entrants from capturing the value created in transactions with the industry's customers². If effective, entry barriers ensure incumbents rights to the profit created in the industry although there is no legal enforcement of these rights. However, buyers and suppliers also have property rights to value that is created in transactions

¹ Property rights ideas have also been applied to competitive strategy thinking outside the market power perspective. For example, property rights ideas has been applied to firms' boundary choices (Teece, 1986;Oxley, 1999), value creation (Foss and Foss, 2005), and value appropriation (Jongwook and Mahoney, 2005).

² *De facto* income rights are similar to what Barzel (1994) calls economic property rights which "indicates the *ability* to receive income" (p.393).

with incumbents in the industry. In the traditional analysis of entry barriers buyers are assumed to be price takers and thus are expected to act passively and accept that the difference between a buyer's and a seller's valuation of a product is captured by the seller. However, buyers sometimes can take action to capture a greater share of the value that is created in the transaction. In part buyers or suppliers ability to capture more of the created value is supported by law. Freedom of contracting implies that buyers and suppliers are not obliged to transact with an incumbent firm. They can for example, spend resources on creating alternatives. In general, buyers and suppliers ability to capture a larger share of the created value depend on the resources they spend on ensuring a de facto control over their rights.

The economic of property rights focus attention on how all individuals optimize the value they gain from protecting or capturing property rights. Thus, in order to understand the impact of entry barriers on industry and firm level profits on must examine the incentive that all relevant parties have to spend resources to capture and protect their property rights (Barzel, 1989, 1994). Thus, we should expect buyers and suppliers (as well as potential entrants) to spend resources on protecting their right to the gain from trade that is created in the industry. How successful they are in their attempts in part depends on the transaction cost, they face doing so.³

A Property Rights Perspective on Industry Rivalry

In the economics of property rights perspective, transactions constitute the fundamental unit for analyzing creation of value. Transactions are conceived very broadly as involving the exchange of property rights, rather than the exchange of services of physical goods *per se* (Coase, 1960). The strong focus on transactions makes it easy to apply EPR ideas to the market power perspective since in the latter the value that is created in an industry is the surplus created from transactions.

³ Outside the market power perspective on strategy, transaction costs have also been ascribed importance because they influence the costs at which resources can be acquired and organized for strategic purposes (Chi, 1994)

Property rights understood as *de facto* control have direct links to the value appropriation aspects of competitive strategy as a firm's value appropriation in transactions depends on its ability to create strong control over income rights to the value that is created. An important distinction, in the analysis of value appropriation, is that between specific and residual income rights. Specific income rights are those rights that transacting parties have explicitly delineated and over which they have a high level of control through mechanism that makes these rights enforceable. For example, a firm has specific income rights to the goods it produces when it enters a fully enforceable contract with a customer that specifies the price to be paid in exchange for the good. Residual income rights are those income rights that are not delineated or not fully enforceable. Thus, firms that sell their goods on spot markets at prices determined through individual negotiations have residual income rights to the items they sell up-until the transaction has taken place.

The distinction between specific and residual income rights makes is apparent that entry into, and industry rivalry within an industry revolves around the residual income rights to the value that is created in the industry. Firms that enter industries and establish production, or incumbent firms that engage in price wars or other attempts of increasing market shares engage in capture of residual income. However, firms that are subject to capture attempts from rivals may protect their residual income by investing in establishing a *de facto* control of property rights to income by means of long term contracting with buyers or by designing products or loyalty programs, which creates high switching costs to buyers. Incumbent firms that are subject to capture by potential entrants may seek to create *de facto* control over rights to an income streams by virtue of investing in the creation of high entry barriers.

When incumbent firms believe that entry barriers protect them from capture attempts by actual or potential rivals, they often seek to maximize their residual income by limiting supply and raising prices

relative to what would be the case without the entry barriers. In turn, buyers' and suppliers' incentives to protect their residual income rights in transactions increase with the anticipation of incumbent firms' exercise of market power. The implication to strategy is that the outcome of rivalry and therefore the amount of value that firms can appropriate depends on the interaction between investments in capture and in protective mechanisms employed by *all* parties to the transactions in question.

The parties' incentives to capture or to create de facto control over residual income rights depend on the transaction costs they encounter relative to the value they expect to appropriate or too loose from others attempts at capture residual income rights. Incumbents' incentives to monopolize industries and invest in protection of residual rights though creation of entry barriers has been the center of attention in the market power perspective on strategy. The strong focus on entry barriers stem from the expected relation between industry concentration ratios and market power. As industry concentration ratio goes up it becomes more and more likely that incumbents manage to coordinate on equilibria with less production compared to the perfect competitive setting. In turn, incumbents' attempts at monopolizing industries negatively influence buyers and supplier. Suppliers suffer because incumbents exercise of market power result in reduction in industry production and as a result a reduction in demand for input from supplier industries. Buyers like wise suffer from a reduction in production but their suffering is in part due to foregone value creating transactions in part due to price increases on the remaining transactions.

In the traditional neo-classic welfare economics buyers and suppliers are assumed to accept both the dead weight welfare-loss as well as the adverse effects if changes in prices, but as will be apparent in the following the dead weigh welfare-loss may in fact in cease buyers' and suppliers' incentives to actively protect their residual income rights. In order to analyze the outcome that may arise from the capture and

protection activities of all affected parties we make use of the Coase theorem of zero transactions cost setting as a bench-mark.

The Coase Theorem as a Bench Mark for the analysis of Industry Rivalry

The property rights perspective aims at understanding how transaction costs influence the creation of value in society. Transaction costs are the resources spent on protecting and capturing property rights to resources in use and in exchange (Eggertson, 1990; Barzel, 1997)⁴. In what has become known as the “Coase theorem” it appears that if property rights to resources are perfectly delineated and transaction costs are zero then all resources in an economy will be used in their best alternative uses such that the creation of value is maximized just as it is assumed in the perfect competition model⁵. The assumption of zero transaction costs is very far reaching as it implies that any property right associated with a resource can be identified, traded¹ and enforced at no costs. Thus, all individuals have full information about the value created from all actual and potential uses of a resource. Identifying and bargaining with relevant trading partners is costless and finally, all partitioning of rights over assets is costless. Although these are clearly unrealistic assumptions, they provide us with a benchmark on which to compare incumbent firms and buyers’ and sellers, potential gains from engaging in the capture and protection of property rights when transaction costs are introduced.

One important implication of a zero transaction cost setting is that no Pareto-relevant externalities can exist (Buchanan and Stubblebine, 1962). This also implies that, no value destroying externalities can arise from monopolization in industries. In fact, when transaction costs are zero, market structure does

⁴ See Douglas Allen (1994) for a discussion of the many definition of transaction costs

⁵ This is a strong version of the Coase theorem (as in Coase [1988] and Barzel, 1997). Debate persist on the precise interpretation of the Coase theorem (e.g., Usher, 1998).

not affect value creation in an industry. The notion of market structure is based on the idea that firms exist to organize productive activities and that the organization of production is constrained by indivisibilities in productive activities and economies of scale. With zero transaction costs, property rights to resources can be perfectly partitioned and ownership to large-scale resources need not be concentrated or monitored by an organization such as a firm (Barzel, 1989). However, even if ownership is concentrated, value is maximized, since buyers and suppliers face no costs forming agreements to enter into contracts and have the monopoly firm produce the value-maximizing amount. For example, buyers and suppliers agree to pay the monopolist a “bribe” that is equivalent to what it would have gained from exercising monopoly power. Both the monopolist firm and its buyers and suppliers will be better off than with the welfare-loss arising from output restrictions (Demsetz, 1982).

The Coase theorem allows us to predict that the welfare maximizing level of production will be reached but not how exactly the created value will be shared – that is we cannot without further assumptions predict how in a world of zero transaction costs property rights to income is delineated. However, we can use the Coase theorem to understand how reductions in transaction costs creates incentives to appropriate and protect property rights to income in ways that change the appropriation of value. When transaction costs are introduced industry structure, sunk cost investments and outside option have an impact on the value appropriation. Consider the impact of industry structure on the delineation of income rights and assume that initially (before the reduction in transaction costs) property rights to productive assets are concentrated as in the monopoly setting. When buyers are price takers, the monopoly appropriates the value that is represented as monopoly profits, while buyers (as a group) appropriate the value that is represented by the consumer surplus. When transaction costs are reduced buyers may form one big coalition (Furubotn, 1991) and the monopoly will find itself in a bilateral bargaining setting. In the extreme case, the monopolist will at least appropriate what is equivalent to the

monopoly profits as the monopolist has the option of refusing to increase production if not compensated for lost income rights. In addition the monopolist will most likely appropriate half of the gains from the additional value that is created by expanding the production (the Nash bargaining solution). The case is extreme because the monopolist must have a cost advantage that makes it inefficient for buyers and suppliers to establish alternative sources of production – that is the monopolist has de facto property rights to the monopoly profits by means of ownership over rent earning resource. If property rights to production initially (before the reduction in transaction costs) is more dispersed (as in monopolistic competition) incumbent firms' value appropriation depend on the delineation of income rights as established through e.g. Cournot or Bertrand rivalry. In the analysis of the outcome one can distinguish two different scenarios. In the first one incumbent firms act on the reduction of transaction costs prior to buyers and suppliers and in the second it is the reverse sequence of taking actions. In scenario one, when transaction costs are reduced, incumbent firms form a coalition to capture more value than they were able to with the initial delineation of property rights. For example, incumbents agree to restrict supply to the monopoly level and to share the gains. In this setting buyers may then act to bribe the coalition of incumbent firms to produce the efficient level and the value created will be shared as described above where a buyers bargain with a monopoly. The only difference is that the “monopoly” is a coalition of firms. In the second scenario buyers anticipate the formation of a coalition of incumbents. When transaction costs are reduced they may enter into long-term contracts with incumbents before these manage to form an alliance. Through contracting, they transform residual income rights into specific rights. Such attempts at protecting property rights is most beneficial to buyers if the initial monopolistic competition resulted in delineation of incumbent firms' income rights close to that expected in the perfect competitive equilibrium. The delineation of property rights to income remains the same as prior to the reduction in transaction costs. Alternatively, buyers can enter into contracts with potential

entrants. This is a strategy that is most beneficial if the initial delineation of property rights is close to that expected in a monopoly setting in the industry. Entrants need no compensation for foregone monopoly profits in order to be induced to produce and entrants thus constitute attractive alternative to incumbents as long as their production costs at the optimal level are not higher than the compensation buyers would have to pay to incumbents for “their” lost monopoly profits. The existences of relatively cost effective entrants improve buyers’ and suppliers’ bargaining position and thereby their expected gains from engaging the capture of income rights. The outcome is a delineation of property rights where buyers capture more of the created value compared to the initial delineation of property rights between incumbents and buyers.

The analysis of the impact on transaction costs on the delineation of income rights does not produce definite answers as to how gains or from a reduction in transaction costs. But we can conclude that industry structure impact on value appropriation to the extent that it influences how income rights over value created in the industry are delineated prior to the bargaining that takes place when transaction are reduced. However, also sunk costs investments impact on how property rights to income are delineated when transaction costs are reduced. In the traditional industry analysis sunk costs investments are considered a means of credibly signaling that ex-post entry prices will deviate from ex-ante entry prices making entry unattractive. Thus, sunk cost investments protect incumbent firms’ income rights and sustain market structures. Consider now the setting where transaction costs are reduced in an industry with a monopolist having made sunk costs investments in capacity beyond the that is optimal for capture of monopoly rents. The investment will now be transformed into transaction specific investments as the monopoly faces a coalition of buyers. The monopolist will not be compensated for its loss of monopoly profit, as it has no other alternative than to accept an increase in production and a reduction of prices. In fact, a monopolist do not anticipate the new bargaining situation

it be held up by buyers who collectively bargain to capture the so called quasi-rents. Likewise, sunk cost investments impact on the bargaining between the coalition of incumbent against coalitions of buyers and suppliers. Incumbents, with large sunk costs investments, have no outside options for those investments and with low transaction costs the coalition of buyers and suppliers have costless information about incumbents outside options and true reservation prices (Hart, 1995).

In much of the traditional industrial economics sunk cost investments are needed to prevent industries from being contested by entrants who enter to capture some of the profit before incumbent(s) retaliate. The delineation of income rights that allow incumbent to capture monopoly profits is protected by incumbents' credible threat of expanding production and lower price so that entrants are not able to cover their cost of entry. Now consider this setting when transaction costs are lowered. Low transaction costs do not change the fact that entrants' sunk cost investments cannot be covered when incumbents expand production to the efficient level. However, potential entrants constitute an outside option as they can be induced to produce at higher average total costs compared to the incumbent. Zero cost of entering into long term contracts between buyers and potential entrants makes the outside option a credible threat and the prices at which entrants can operate constitute a bargaining chip that impacts the delineation of economic rights between buyers, suppliers and the incumbent firm(s).

In sum, an important implication of the zero transaction cost assumption for competitive strategy is that there are no value reducing externalities due to firms' exercise of monopoly or bargaining power. Buyers and suppliers as well as incumbent firms have incentives to maximize the creation of value through exchange. This implies that if transactions costs are reduced in industries characterized by monopoly or monopolistic structures we should expect a change in industry production toward the optimal level. The reduction of transaction costs set in motion a process of forming coalitions and contracting such that residual income rights will be delineated and transformed into specific income

rights and contenders with the highest valued outside options will appropriate the larger share of the created value. We can sum up the analysis of the relationship between rivalry, industry structure and transaction cost as follows: *Industry structure impact on incumbent firms' appropriation and delineation of residual income rights. When transaction costs are reduced the initial delineation of residual income rights in the industry only matter to incumbent firms appropriation of value to the extent that buyers have no outside option while incumbents do.*

A Property Rights Perspective on Entry Barriers

In much of the positioning framework it is implicitly assumed that firms own resources that allows them to hold a preferred position in the market from which they can exploit market power. In fact, much of what is mentioned in the positioning frameworks on entry barriers starts from the assumption that firms fully (and costless) can enforce property rights to certain resources that allow them to create entry and exit barriers (Porter, 1980, 1981; Shapiro, 1989; Conner, 1999). The analysis then centers on how property rights to these resources create a means of protecting incumbent firms' income rights by protecting the industry incumbents from the pecuniary externalities that arise with increased rivalry.

In the following, we are interested in understanding how a reduction in transaction costs faced by buyers and suppliers influence both the nature and the importance of different kinds of entry barriers. For that purpose, we use the distinction between natural and strategic entry barriers (see e.g. Porter, 1980). Natural entry barriers arise from differences in cost conditions as emphasized by Stigler's (1968) whereas strategic entrance barriers arise from strategies that firms employ to deter entry (Porter, 1985). In the traditional industrial economics analysis the success of these strategies, depend on how

entrants expect incumbents to react in case of entry. Entry is deterred when entrants expect the ex-post equilibrium market prices and production levels to be such that their entry cost and cost of production cannot be covered.

The most often mentioned natural entry barriers stem from economies of scale, control of essential resources and marketing advantage. Natural entry barriers such as e.g. economies of scale are affected by the presence of transaction cost. As already mentioned, when transaction costs are low economies of scale would not necessary result in single firm ownership over the production capacity as producers could costless contract over the access to and the maintenance of the equipment necessary to realize economies of scale although single firm ownership is entirely possible. In either case, producers who see a benefit from adding capacity to the industry will enter into market contracts with the owner(s) of large-scale equipment and extend production to the optimal level. Each producer will look at his marginal benefits of extending production while taking into account the pecuniary externalities imposed on the other producers. However, producers will also take into account the benefits to initial as well as potential customers and suppliers. As already discussed, the industry outcome in terms of production levels does not depend on the existence of economies of scale but the incumbent firm's appropriation of value depend on proprietary ownership to large scale equipment. A similar analysis can be carried out with respect to the ownership of essential resources. When it comes to the barriers that arise from marketing advantages, firms' property rights to brands are often mentioned as key to entry barriers. Brands often are associated with large sunk cost investments in advertising. From a property rights perspective, the value to customers of such investments stem largely from their ability to reduce transaction cost (Demsetz, 1982). Thus, with low transaction costs much of the consumer loyalty associated with brand names will disappear and so will their effectiveness as barrier to entry.

The positioning framework of Porter (1980; 2008) emphasize the use of strategic entry barriers as supplementary to the natural entry barriers and most research over the last two decades has focused on “strategic” entry barriers that are purposely built to reduce entry (Salop and Scheffman, 1983; Shalop, 1979; Tirole, 1988; Ghemawat, 1991; Alchian, 1965). Limit pricing, predatory pricing and excess capacity are typical examples of strategic entry barriers. Strategic entry barriers serve two different purposes. Incumbents can use these strategies to protect property rights to income in monopolized industry or they can use these strategies to build market power by monopolizing industries. In the following focus is on how transaction costs matter for incumbents’ ability to build market power. Consider “predatory pricing” which may be seen as an instrument to build market power by changing the structure of an industry (cf. Demsetz, 1982; Weigelt & Camerer, 1988; Snyder, 1996). A predating firm eliminates competitors (“preys”) by setting prices below its marginal costs (which must be at least as high as the preys’ marginal costs). When rivals are eliminated, the monopolist raises prices towards the monopoly level. A long, protracted debate in industrial organization economics led to the conclusion that a predatory pricing strategy can work when there is uncertainty about the would-be predator’s type (Kreps & Wilson, 1982). However, this conclusion assumes that the relevant preys are competing firms only. In actuality, the set of preys also includes buyers, who suffer when the predating monopolist raises prices after having driven out rivals. Similarly, suppliers are harmed by the industry becoming monopolized. Again, at sufficiently low transaction costs, potential victims of monopolization may make use of contracting as a defensive measure. If buyers anticipate predatory actions by an incumbent they can take action to protect their property rights. Buyers can enter into long-term supply contract with rivals to the predator. The predator cannot offer customers contracts that are superior to a contract with a rival that stipulates the prevailing competitive price as the one under which future transactions will take place. The reason is that the predator gains are less than the combined loss to the buyers and suppliers as

the predator create efficiency losses both from pricing below marginal cost (to drive out rivals) and thereafter from reducing production and pricing above marginal costs (Barzel, 1994).

The effectiveness of strategic entry barriers has traditionally been looked at only from the perspective of the entering firm and focus has been on how to create credible signals of ex-post outcomes of entry. A general implication of the research on strategic entry barriers is that sunk cost investments are necessary to sustain entry barriers in equilibrium (Baumol et.al., 1982; Sutton, 1991) the paradigmatic case being excess capacity which simultaneously represents sunk costs and signals a credible threat (Shapiro, 1989). In the absence of sunk costs, markets are perfectly contestable. However, as already mentioned with low transaction costs, the presence of sunk cost may not be a sufficient condition for protecting against entry. Entrants have the possibility of offering long-term contracts to customers before entering an industry where the length of the contract being equal to the economic life of the sunk investment. This makes the industry contestable, as the contracts protect entrants from post-entry competition. Because, under these conditions, entrants can recover their sunk costs they will enter the industry. In other words, markets can be contestable even with sunk costs. This possibility has been recognized in industrial organization economics (Sexton, 1987; Innes and Sexton, 1994). What is not explicitly discussed in the relevant literature, however, is that this conclusion depends on transaction costs being sufficiently low to allow for those contracts that can “offset” the incumbent’s attempt at protecting his market power. Thus, the incumbents’ cost advantages from sunk cost investments must be sufficiently large that they offset the net gains to buyers and suppliers from taking actions against the monopolist appropriation of created value. How much larger the cost advantage need to be depend on the transaction costs that victims face in their attempts at creating outside options.

We can sum up the analysis of the relationship between transaction cost, entry barriers and market power as follows: *The level at which entry barriers are effective depends on the size of value lost to those who are adversely effected by the entry barrier relative to their transaction costs of countering the adverse effects.*

Conclusion and Managerial Implications:

Much research has centered on the use of entry barriers as a protection mechanism in industries. Entry barriers are perceived of as directed toward potential entrants and aimed at hindering these in making it economic attractive to establish productive capacity in the industry. The analysis in this paper suggests that the presence of transaction costs is important for successful use of entry barriers as means to market power.

In sum, the analysis of entry barriers cannot be limited to an analysis of the cost disadvantages and equilibrium expectations of potential entrants. It must also include those agents whose residual income rights are negatively affected by incumbents' exercise of market power. More precisely, the analysis must include the transaction costs that affected parties' encounter in their attempts at protecting what they perceive of as their residual rights to income. Note that when transaction costs are explicitly taken into consideration, competitive industry forces (Porter, 1980; 1981) are *interdependent*, because the different players that have a stake in industry profits can (depending on transaction costs) form coalitions (e.g., buyers can collude with firms).

Transaction costs are not necessary exogenous. Incumbents can often to raise cost to costumers of entering into contracts with potential entrants. For example, incumbent may bundle transactions in ways that makes it difficult for customers to compare offerings and therefore to find relevant outside offers.

The sales practices in the mobile phone industry represent an example of the bundling of different services making it costly to customer of comparing prices and services. They may upgrade products or supply complementary services on an ongoing basis to make contracting costly. Finally, incumbents may reduce dead-weight welfare losses by entering into price-discrimination practices. The above analysis indicates that there is a need for an extended analysis of the way in which transaction costs influence the strength of entry barriers to industries.

In fact, the impact of transaction costs on the competitive conditions in industries has been a relatively neglected area of research. However, recently industries such as hotels and taxicabs have faced increased competition from suppliers that would not seem to be near substitutes using traditional industry analysis. The extended supply of internet capacity along with the advent of mobile phones and apps have drastically reduced buyers' search for capacity in servicing their need for hotel and transport services. When perceived from a property rights and transaction costs perspective buyers are now facing low costs of entering into contracts with hitherto unused capacity. Thus, simply reducing search costs for buyers and possessors of capacity has have great effects on industry competition. Thus, transaction costs need not be eliminated nor do buyers and suppliers need to form coalitions in order for a reduction in transaction costs to have an impact on industry competition. The importance of reduced search costs may be important in many other industries where adding capacity represent a large scale sunk cost investment (as in the hotel industry) or where incumbents are protected by regulations as in the taxicab industry.

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