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ABSTRACT

Thinking Creatively About Markets*

Market definitions are an abstraction: they are useful only to the extent that they help us to organize the way we think about certain types of economic activity. This paper critically examines three different methods of identifying market boundaries, stressing the link between substantive content and the needs of the user of the definition. Most traditional definitions have focused on identifying trading markets (defined by the 'law of one price') or anti-trust markets (identified by reference to the ability of a group of firms to artificially elevate prices). A third market concept – that of the strategic market – focuses more directly on the needs of corporate users.

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NON-TECHNICAL SUMMARY

Market definitions are very important for most firms. Identifying markets matters to firms because it is important to the construction of their identity, to the task of putting together a list of skills or competencies which they need to develop, to designing organizational structures and, perhaps most important of all, to the process of strategic innovation.

Most economists work with methods of identifying markets which are not particularly helpful for these purposes. For many economists markets are just a list of people located in particular places, or a list of products connected with each other by high cross elasticities of demand. Yet demand-oriented approaches to market definition (such as these) are seriously inadequate: they produce no useful information about why people buy the products in question, and they do not necessarily identify viable markets. For example, there is a well-defined list of people who have expressed a real demand for an AIDS vaccine and for whom the cross elasticity between such a vaccine and aspirin is practically zero. In the absence of a particular product which can be produced and distributed economically, however, one cannot say that such a market exists. This implies that supply-side factors should be an integral part of market identification.

Market definitions should be concentrated on identifying viable activities, not lists of people or products. This paper identifies three market concepts which have a clear link to activities which particular economic agents might legitimately be interested in. The most traditional of these is the *trading market*, which identifies the area within which the law of one price will apply. The activity at the centre of this market definition is, of course, arbitrage. A second activity, traditionally of interest to economists, is price fixing, and the market concept appropriate to that is the *anti-trust market*.

Neither of these market concepts provides much help for corporate users interested in strategic innovation. There is a third, however, that focuses on identifying the smallest viable area of activity, something which has been called a *strategic market* in the literature. Identifying strategic markets is important for firms for two reasons: concentrating on the *minimum* area helps separate strategic necessity from strategic options, and concentrating on *viability* is the natural way to bring together both the supply- and the demand-side factors that jointly drive the shape and functioning of any particular market.

I. INTRODUCTION

One interesting feature of the development of new technologies is the important role that buyers play in affecting their evolution. Very smart buyers often push the producer of a new product or process innovation well past existing technological frontiers, while uninformed myopic or penny pinching buyers frequently kill potentially important new advances. The influence of users is evident also in the production of new knowledge by industrial economists (and, of course, all other scientists). We have traditionally only recognized two major users for our research work: ourselves (which is why the literature is frequently inward looking and arcane) and public policy makers (for us, this mainly means the anti-trust authorities). However, as more and more industrial economists migrate to business schools, we as a profession are gradually coming to recognize the importance of a third group of users: corporate strategists, the consultants who get involved in corporate strategy discussions, market analysts and other private sector agents. It is my view that the emergence of this third set of users has already had, and will continue to have, a profound affect on the type of work that we do. One example of this is likely to be how we think about market definitions.

Identifying market boundaries is widely regarded by Industrial Economists as a worthy but dull chore (it is also sometimes very profitable). Indeed, for a profession that purports to be interested in what happens in markets, we devote surprisingly few resources to defining what might naturally be regarded as our basic unit of analysis. Part of the reason for this is that markets are places where interesting things happen, and thinking about these things seems to be much more exciting than trying to identify the places where they happen. Another part of the reason for this neglect, however, is that many scholars feel that market

definitions are artificial and arbitrary, and are not "real phenomena" worthy of analysis. In a sense, this is quite right. Market definitions are a way of intellectually organizing the way we think about the economic activity we observe, and are not inherent in the nature of things. It is, however, often very convenient to classify certain kinds of activity as belonging to a specific "market", and I suspect that we are always going to want to take advantage of this convenience. The important point is that identifying markets is about identifying the boundaries of certain types of activity. Further, the way we draw market boundaries should (and usually does) depend on why we want to do it (i.e. on the type of activity that we are interested in).

The subject that I would like to explore in this address is how the needs of corporate strategists is likely to affect the way that we think about market definitions. I shall start (in Section II) by briefly examining two traditional market definitions, the **trading market** (in which the law of one price rules) and the **antitrust market** (which is geared towards the needs of antitrust policy users). Aside from reiterating the rather well known point that markets defined in these two ways are not usually coincident, the main goal of this section is to set a standard against which to compare other market definitions which are likely to be more useful to corporate strategists. Their needs will be the subject of Section III, which unfolds in three stages: I will start by briefly outlining why market definitions are important to corporate strategists, then I will talk about how the construction of market boundaries could and should be done in practice, and, finally, I will close by examining one particular market definition that has recently been proposed, that of the **strategic market**. Section IV sums the argument up.

If this paper has a bottom line, it is that there are two good reasons why thinking creatively about market definitions is important. The first is that there are many users of the work we do who need to think creatively about their markets, and if we are going to do anything useful for them (an option we may choose not to exercise of course) it will be to help them do what they need to do. The second reason is that they are going to think creatively about their markets whether we help them or not, and if we are going to understand the developments of the economic activity we observe from our Olympian heights, then we are going to have to understand what they are doing.

II. TRADING MARKETS AND ANTITRUST MARKETS

The classical definition of a market is as old as the first reflective musings on the nature of commerce, and, needless to say, finds a clear articulation in Marshall's *Principles*.

Marshall started by citing Cournot:

"Economists understand by the term market, not any particular marketplace in which things are bought and sold, but the whole of any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly",

and then Jevons, before going on to add that:

"the more nearly perfect a market is, the stronger is the tendency for the same price to be paid for the same thing at the same time in all parts of the market: but of course if the market is large, allowance must be made for the expense of delivering the goods to different purchasers; each of whom must be supposed to pay in addition to the market price a special charge on account of delivery" (1920, p. 270).

This conception of what a market is leads naturally to the definition of a **trading market** as a collection of individuals (and associated geographical area) who face the same net price for any particular good or service; i.e. the area over which the law of one price holds.¹

Textbooks typically suggest that trading markets can be identified by examining cross-elasticities of demand. While this seems reasonable in principle, it is difficult in practice to know how big a cross-elasticity has to be for one to be confident about drawing a market boundary between or around any two products. Further, smart firms whose products are very highly substitutable with other products will never generate the data we need to compute cross elasticities, since it is unlikely to be in their interest to unilaterally raise or lower the price

of their products in isolation. Textbooks also suggest that trading market boundaries might be drawn by applying the law of one price, identifying areas over which the same price prevails for the same product. In practice, however, almost all products differ from each other in one dimension or another, and it is often very difficult to work out whether the net price difference between any two violates the law of one price. Further, the products which consumers think are substitutes for any one particular product depend on its price, so the dimensions of a market mapped out by using the law of one price may depend on which price one has in mind. These problems have led to the development of a variety of alternative market tests, including those based on flows of goods, the degree of parallel movement in prices, Granger causality in price movements and the estimation of residual demand curves.² Although it cannot be said that it is possible to produce a completely uncontroversial identification of trading market boundaries in any particular set of circumstances, most working economists are able to make quite a lot of progress using one or more of these tests.

The really interesting question, however, is not how to identify the boundaries of a trading market but to identify who might care where the boundary is drawn. Trading markets are a natural way to think about markets for those who are primarily interested in price setting, since a trading market is, by construction, a pocket of relatively homogeneous demand located in a network of arbitrage strong enough to sustain a single price. Amongst others, those interested in analysing exchange economies are natural users of this market concept.³ For corporate strategists, trading markets are interesting mainly in the context of price discrimination. Most firms are interested in minimizing the size but (carefully) proliferating the range of the trading markets they operate in as a way of charging different prices to different types of consumers. Price discrimination is not, however, the only or even the major problem which corporate strategists face. Similarly, antitrust authorities are

interested in trading markets because arbitrage can temper the exercise of market power. However, this hardly exhausts their interest in the subject: one cannot take the degree of arbitrage as an inverse measure of the degree of market power.

A much more natural market concept for antitrust authorities to use is one which identifies a set of producers, products and a geographical area which could, in principle, be monopolized.⁴ Thus, an antitrust market might be defined as a:

"...product or a group of products and a geographical area in which it is sold such that a hypothetical, profit maximizing firm, not subject to price regulation, that was the only present and future seller of those products in that area would impose a 'small but significant and non-transitory' increase in price above prevailing or likely future levels" (US DOJ, 1984, p. 13).

The kernel of this conception is that of identifying the minimum area and a collection of producers who could, in principle, exercise market power in that area if they acted collectively. If this group is large, then prices are unlikely to be artificially elevated; if, however, only a few firms inhabit an antitrust market, then monopolistic pricing is much more likely to occur.⁵

This market definition has the great virtue of focussing directly on the needs of those interested in identifying monopoly power, using a test expressed in terms of the major variable of interest (monopoly pricing).⁶ It is, however, basically a counterfactual construct, and it is unlikely that antitrust market boundaries can be established from routinely collected market data. Further, for reasons that we will discuss in a moment, it is also not clear that the techniques used to draw the boundaries of trading markets will be particularly helpful in identifying the boundaries of antitrust markets, although they are clearly not unhelpful. The kind of algorithm which might be applied in the context of a merger to identify an antitrust

market would:

"...begin with the location of each merging firm...and ask what would happen if a hypothetical monopolist of the relevant product...imposed a 'small but significant and nontransitory' increase in price. If this increase in price would cause so many buyers to shift to products produced in other areas that... (the) hypothetical monopolist...would not find it profitable to impose such an increase in price, then... (one should)...add the location from which production is the next best substitute...and ask the same question again. This process... (should)... be repeated until.. (one)... identifies an area in which a hypothetical monopolist could profitably impose a 'small but significant and nontransitory' increase in price" (US DOJ, 1984, pp. 13-14).

Although trading markets and antitrust markets are obviously related, there are at least two reasons why they are not always coincident. First, capacity constraints (or low elasticities of supply) mean that some members of a trading market may not be effective members of an anti-trust market (at least in the short run), since they will not be able to increase their output when a rival acts monopolistically and raises price (Scheffman and Spiller, 1987). Second, the size of trading markets depends on the degree of market power exercised by firms that operate within them. On the one hand, a firm with market power is likely to raise its prices to the point where rival products begin to be substitutes in customers eyes. Hence, as a monopolist initiates a *"small but significant and nontransitory increase in price"*, it is likely to increase the list of products and firms that customers regard as substitutes and, for this reason, broaden the trading market they operate in. On the other hand, if firms with market power are able to limit arbitrage and price discriminate between the customers they serve, then one may observe many sustainable price differences within an anti-trust market.⁷

While these two types of market definition are well established and reasonably well suited to the needs of certain users, they are not particularly helpful for corporate

strategists. The quintessential corporate strategy problem is that of matching internal corporate resources or capabilities with external opportunities. Firms don't find themselves operating in markets whose boundaries are defined as part of the natural order of things. They create the markets they operate in, seizing those opportunities which suit their abilities and making them into profitable activities. Amongst other things, this means that firms must think about their market in a way which links directly into the strategic choices they make about how to serve that market. That is, they need to link market definitions with some of the fundamentals which drive supply and demand in "*their market*".

III. STRATEGIC MARKETS

To understand the kinds of market definition which can be useful to corporate strategists, it is necessary to start by examining their needs. There are at least two reasons why market definitions matter for firms.

(a) strategic innovation and market boundaries

The first reason why defining a firm's market is important is that the nature of the market that a firm serves has an extremely powerful effect on its identity, the skills or expertise which it needs to amass in order to be competitive and on its organizational structure. The identity of a firm, often the stuff of mission statements and ponderous speeches by the Chairman, helps to focus the energies of individuals scattered throughout the firm, providing a common sense of purpose and style. Indeed: *"...there are serious semantic and conceptual problems in defining market boundaries independent of business, since businesses themselves are conventionally described in part by their market scope"* (Abell, 1980, p. 23). Business people often use the phrases "my market" and "my business" interchangeably, and it is easy to understand why. One does not need to spend more than five minutes visiting (say), first a fine fragrance producer and then, second, a scientific instruments company to appreciate that there are enormous cultural differences between the two types of organization, differences which seem perfectly consistent with the different kinds of markets the two organizations serve.

More deeply, to serve these different markets, the two types of firm will need to

assemble different types of skills. It is sometimes argued that there are a range of "*generic strategies*" which firms might select, depending on the circumstances of their market.⁸ On the one hand, firms who operate in markets where differentiating their products is important (the fragrance house is likely to fall into this category) will want to accumulate a range of marketing and/or new product development skills and a valuable brand name. On the other hand, firms who operate in markets where price is an important determinant of sales (a scientific instrument maker whose product is a fairly standardized commodity might fall into this category) are likely to be much more concerned about their costs of production, and will want to develop process innovation skills and supplier management systems which squeeze costs. The differentiator is likely to look down its value chain towards final consumers, while the cost leader will focus more of its energy up the value chain towards its supplier base which is where its source of competitive advantage is likely to lie.

Market definitions may also have a profound effect on how a firm structures itself. The basic idea behind divisionalization is to decentralize decision making, bringing strategy choices as close to implementation decisions as possible (that is, as close to "the market" as possible). The need to monitor what business unit managers do means, however, that the divisions which they run must be independent: managers must be judged by the outcome which their decisions helps to bring about. No manager should be held responsible for events that occur in a market which s/he does not serve, while no two managers can sensibly be assessed ipdividually if they serve the same market. The bottom line, then, is that the boundaries of divisions must match the borders of markets if divisionalization is to tighten the link between strategy formulation and strategy implementation on the one hand, and sharpen incentives to make business units perform well on the other. If markets for ice cream are strictly national (i.e. if events in one national ice cream market have no effect on the

operation of other national ice cream markets), then a firm which creates a European ice cream division has not decentralized as much as it could, while a firm that tries to operate two independent ice cream divisions in the same national ice cream market is storing up trouble for itself.

The second reason why market definitions matter for firms is that the reconstruction of market boundaries can be a major source of strategic innovation. On a modest level, incremental innovation happens whenever firms identify new and more profitable segments of existing markets and serve them with new products variants or new services. More radically, successful major innovations almost always follow the identification of new customer needs that existing products or services do not meet, or the development of new products or services which meet existing needs in a fundamentally new way. By thinking creatively about what "the market" is and, more fundamentally, what it could be, firms often uncover new opportunities for innovation.⁹

An example may help to make the point (what follows is drawn from Bevan, 1974). Thirty or forty years ago in the UK, crisps (potato chips) were something that men ate in pubs while they drank beer (and did other things). At the time, the market was dominated by a firm called Smiths. In the early 1960's, a regional crisp producer called Golden Wonder made a determined assault on the national market. Although they took advantage of some process improvements in frying and packaging which made crisps tastier and increased their shelf life, the main thrust of their assault on the market was to aim their product at women and children, turning crisps from pub fodder into a family snack. This tactic had the great advantage of outflanking the entry barriers which Smith enjoyed in serving pubs by opening up new marketing channels (national advertising) and retail outlets

(existing grocery stores and the newly emerging retail chains). In almost no time at all, Golden Wonder became the market leader. Smiths saw their annual sales continue to rise and, not having understood the fundamental enlargement of the market engineered by Golden Wonder, made the incorrect inference that their market share was also rising despite the activities of Golden Wonder. In due course (i.e. after it was taken over and a new management installed), Smiths responded by introducing flavoured crisps, provoking a war of successive product innovations by both firms (and some of their smaller rivals) which transformed a very modest sized market for plain potato crisps into an enormous market (possibly as much as ten times larger) for savory snacks.

This story neatly illustrates two points of some importance. First, redefining a market is often the only way to engineer successful entry into an activity which is well protected by entry or mobility barriers. Very roughly speaking, barriers retard entry either because entrants cannot get access to a crucial input (which gives rise to a product differentiation or an absolute cost advantage for the incumbent) or because the entrant cannot gain access to enough of the market to exploit scale economies (or amortize set up costs) and operate on a competitive par with incumbents. These barriers create obstacles to imitation, but an entrant who is able to change the nature of the market (destroying the product differentiation or absolute cost advantages of incumbents) or substantially increase its size (overcoming the barrier created by scale economies) should be able to create a gateway for its own entry (see Yip, 1982). This is exactly what Golden Wonder managed to do, and they did it so successfully that the incumbent didn't even notice that it had been overtaken by the entrant.

The second point of importance in this story is that there is a hierarchy of strategic

decisions to be made when firms construct a competitive strategy, and identifying market boundaries almost always tops the list. Once a firm has chosen its market, it has defined who it is serving and with what. The next natural question is how it should serve its customers: with what price structure?, with what kind of advertising?, through which retail outlets?, and so on. In the case of Golden Wonder, redefining the market as one mainly populated by women and children interested in mid-day snacks (rather than men interested in drinking a lot of beer) automatically meant that it would end up doing different types of advertising (national advertising aimed at women and children), creating a different brand image (family or child oriented), serving different retail outlets (supermarkets and not pubs) and offering different products (family sized packs of crisps, and then various types of child oriented savory snacks) than would have been the case if it had assaulted Smiths market head on. The point is, of course, all of these choices followed from the identification of the new market which Golden Wonder set out to create.

(b) identifying markets in practice

Needless to say identifying a genuinely new market is a lot harder than it sounds, and it is not entirely clear that any particular new market can be brought into existence just because an ambitious firm hopes that it will happen. Although it is very hard to be sure, my sense is that in practice firms try to identify (or redefine) markets in one of three ways: identifying **people and places**, identifying **needs and functions** or ignoring demand altogether and focussing on **supply side factors**. Let us consider each approach in turn.

Most practitioners think of markets as a list of **people and places**. They identify who they think is in their market (often going to great lengths to identify different types of

customers), and then append a list of people living in certain places who they would like to entice into their market. Although it is rarely done formally, one of the things which helps to determine which people and places get on these lists is the law of one price. The reason for this is that the object of a market definition exercise of this variety usually is to segment markets and introduce price discrimination schemes of one type or another. In as far as new market segments are identified (and existing segments are refined or redefined), this procedure typically leads to incremental rather than radical strategic innovation. To engineer a radical strategic innovation, one needs to uncover new needs not met by existing products, or new functions for existing products to perform.

Thinking about **needs and functions** is a lot more difficult than simply listing people and places (which is why it is much less frequently done). At base, looking at the needs of consumers and the functions which existing products and services purport to serve requires understanding why consumers buy certain types of products, and what they value in them. For economists, the natural way to think about this is to identify the characteristics (or attributes) of the products or services on offer, and estimate a shadow price for each. When consumers are unwilling to trade off different characteristics very readily, it makes sense to identify both products and consumers with an address in product attributes space and define markets in terms of a small number of highly valued attributes. Thus, for example, some firms serve the "natural foods" market or the "instant coffee" market, while their executives travel in a "business class" seat and stay at "five star" hotels which are defined in terms of a number of specific services available to holders of that ticket or renters of those rooms.¹⁰ While it is often the case that one can construct a useful list of people and places to populate each of these characteristic defined markets, the thrust of this approach to market definition is to identify what the product does before thinking about who it does it to.¹¹

Both the focus on people and places and on needs and functions are essentially demand side approaches to market definition. Many economists believe that this is the right way to approach the question, and they often argue that Census based definitions of "industries", which group groups of firms using the same technology together, are misleading.¹² In fact, **supply side factors** are often used by firms to identify markets, and there are at least two good reasons why this is a very sensible procedure to follow. First, supply side approaches to market definition have the great virtue of identifying rival firms, and, if they are carefully done, they can provide some sense of "how far" each potential rival has to travel in order to pose a formidable competitive threat (this is particularly true of Census based definitions). Many firms (particularly those who are in the forefront of developing a new technology) compete on the basis of R&D investments or new product innovations, and their natural reference group are those firms who make similar investments in R&D and not those firms who serve the target list of people and places with soon-to-be-made obsolete products. Second, firms that develop a new technology often do not fully see all of the potential uses and functions which that technology will ultimately serve. For them, a sense of identity and purpose (together with the requisite shopping list of skills) is determined by the technology they are using and not by a list of the people and places who they are (or will be) serving. Defining their market in terms of the technology makes a good deal of sense, at least until the technology stabilizes and consumers catch up with its possibilities and form well defined preferences for particular products or characteristics.

In fact, supply side definitions of markets typically focus on one or more of three types of supply side factors: **technology, networks and/or distribution systems, and economies of scale**. A **technology based market definition** of a firm's market typically describes it as those products and services which can be generated by using a particular

technology. Similarly, a **network based market definition** is essentially a list of the products and services which the network controlled and run by a firm can carry. Retail chains (such as banks or department stores) have a business that runs around a series of outlets which customers visit. In a sense, each outlet is a kind of a market containing whatever products consumers are willing to purchase in that outlet, a consideration which, in turn, depends on the nature of the outlet itself.¹³ Much the same considerations apply to telecommunications suppliers whose fibre optic networks can carry a startlingly wide range of different products and services. From a corporate strategy point of view, "the network" is the core of their business, and, therefore, the right way to think about their market. Distribution channels can also be the right way to think about a firm's markets whenever it is the case that how the product is sold matters. The market for, say, prestige fragrances which are sold exclusively through a small number of carefully selected outlets is composed of the people who visit those outlets, whoever they are.

Most of us find it rather odd to talk about a market as a network, a collection of retail outlets or as a branch of applied genetic engineering. Taken literally, of course, this way of thinking is a nonsense, although (less formally) it can be a very suggestive way of thinking about what a firm does; that is, of understanding the core activities which are the key to the firm's competitive success. It can also be a useful way of thinking about either people and places or needs and functions, particularly when the list of people and places or needs and functions is difficult to construct (or just in need of a convenient label). Indeed, a supply side definition makes sense when it is the technology or the retail outlet or the network (or whatever) which is the principal determinant of who and what are on the list. Amongst other things, this means that it has the virtue of linking "*the market*" with the firm's own internal capabilities (that is, with what it does). Thinking strategically about "*the market*"

for a firm in this way makes it very easy to think about what the firm could (or should) do to appeal to current and/or potentially new consumers. This, of course, means thinking about managing retail outlets, developing technology or extending the network in new and innovative ways.

The other supply side factor which often underlies market definitions is **economies of scale**. The classic example of a supply driven market definition is the so called "*global market*" which many firms feel that they operate in:

"...a powerful force draws the world toward a converging community, and that force is technology....The result is a new commercial reality--the emergence of global markets for standardized consumer products...Corporations geared to this new reality benefit from enormous economies of scale in production, distribution, marketing and management." (Levitt, 1983, p. 92).

Underlying this market definition is the (in general rather implausible) assumption that demand is very similar in all locations, that tastes are homogeneous enough to support a single standardized commodity whose low price drives out more customized or niche oriented products. The imperative which globalization is alleged to create is that of exploiting scale economies to lower costs, a process which, in turn, is likely to reinforce the global nature of the business (as continually lower prices gradually widen the geographic base of the business). This means that a market is as global as economies of scale permit, and its boundaries are, therefore, essentially defined by supply side factors. A firm out to serve a global market rarely thinks about its individual consumers (it has enough to do internally to assemble a sufficiently large scale production, distribution and marketing operating), and, if the market really is global, that is exactly the right thing for it to do.

(c) strategic markets

Once one accepts the argument that market boundaries are not an inherent part of the organization of economic activity, but something which we use to classify that activity in our minds, it becomes plain that there are lots of different ways to undertake a classification exercise. In fact, "*...there is no single correct way to define the market for a given business unit...a market not only can but should be defined in several different ways.*" (Buzzell, 1978, p.3). Clearly, attempts to use only people and places, needs and functions or any particular supply side factor to define a firm's market will paint quite different pictures of its business. This kind of tension can act as a spur to creativity. For many people, however, the ambiguities which arise from not having a single, universally agreed upon market definition are either annoying or too intellectually difficult to handle. There will, therefore, always be a demand for someone to produce "the" correct market definition in any given set of circumstances. I know of two solutions to this problem.¹⁴

A number of marketing and business strategy scholars have argued that markets should be defined along three dimensions: consumer groups, consumer functions and technologies (see Buzzell, 1978, Abell, 1980, Day, 1981, Markides, 1997, and others). These schemes typically involve trying to construct a three dimensional picture in which to locate any particular product or service and its rivals. This approach has the great virtue of encompassing all three types of market definition discussed above, marrying supply and demand side approaches to market definition into a single classification scheme. While the goal is laudable, a few moments reflection suggests that many of the gains are likely to be illusory. There is no obvious metric to use in defining technology (or, for that matter, the other two ordinates), meaning that slight redefinitions may lead to major changes in the

address of particular products. Further, it is never entirely obvious which consumer functions or what aspects of technology matter (unless one has computed shadow prices), meaning that the practice of defining markets in this way is likely to involve as much thinking about what the ordinates should be as about where the firm's product lies along any arbitrarily chosen ordinate.

There is a second, rather more natural approach to the same end. People and places, needs and functions and supply side factors all matter to a firm because they generate profits, and any market definition which focusses on defining a set of profitable activities will inevitably encompass consumer groups, consumer functions and technology. This consideration has led to the suggestion that firms might try to identify a **strategic market**, defined as "*...the smallest area within which it is possible to be a viable competitor*" (Kay, 1990, pp. 3; see also Kay, 1993, Chapter 9). The two key features of this definition are "*smallest*" and "*viable*", and useful way to see the power of the concept is to apply it to the vexed question of whether any particular market truly is global or not.

"*Viable*" refers to profitability, and this means that it reflects both supply side factors and demand side influences. On the one hand, a strictly national producer of a commodity whose production is subject to substantial economies of scale is always at risk of being undercut by a large sized foreign based competitor, and, therefore, it is unlikely that operating at a strictly national (or even at a sub-national) scale will be viable. On the other hand, if the product is capable of being differentiated and niches of consumers who value certain variants of the product very highly exist, then a firm that serves these niches well can sacrifice the cost advantages of large scale operation without threatening its viability. In this case, it would be incorrect to assert that the "market" in question was global, even if it were

populated by global players. More generally, viability means that a strategic market must be built up around products or services which perform valued functions. This means matching technological capability to important user needs, and assembling a long enough list of people who have these needs to make serving them profitable.

"*Smallest*" is important because it enables one to draw a strong line between strategic necessity and strategic options. When small, economically viable niches exist in a market otherwise characterized by substantial economies of scale and homogeneous demand, firms have a choice: they can occupy one of these niches or they can operate globally. The strategic market is not, in this case, the global market, since a viable smaller alternative exists. That is, a firm may choose to go global, but it needn't necessarily do so. More generally, the "smallest" criteria enables one to take what is often a long list of possible markets and reduce it somewhat by eliminating those which will never be profitable. Thinking about smallest in this context is often also a useful discipline on the ambition of managers, many of whom instinctively think that being anything other than "the largest" is not viable.

(d) different market definitions compared

The notion of a **strategic market** is very close conceptually to that of an **anti-trust market**. Both are designed to identify the minimum area in which "something" might be done, or an opportunity that might be taken advantage of. From the point of view of a corporate strategist, that "something" involves designing, producing and then selling a product to a collection of individuals; from the point of view of an anti-trust authority, that "something" is monopolizing the sale of a certain product to a group of people and artificially raising prices. At first sight, the notion of an **trading market** seems rather different, not least

because it is much closer to one's instinct that a market is a location where trading occurs. Nevertheless, these apparent differences fade somewhat if one tries to define a trading market in terms that a user might choose; that is, as an answer to the question: "*what is the minimum area within which a firm (or a trader) will be forced to charge all consumers exactly the same prices for the same good or service?*".

Expressed in these terms, all three market concepts have a number of features in common. They all focus on identifying a minimum area (or set of activities), whether that be the minimum area over which the law of one price holds, the minimum area which can be cartelized by firms or the minimum area which a firm needs to serve to be viable. This seems to be because most questions about market size are directed towards the question of *whether* something could happen. It is, of course, possible to think of maximum market areas, and it may be that there are a set of users who will find these to be interesting answers to their questions.

However, these three market definitions will generate exactly the same set of market boundaries only when markets are islands of distinctly different types of activities. A practical example of this may be certain types of large scale procurement contracts (say for chemical detectors, certain types of missiles or user specific information systems). Each contract is large enough to support a viable business, each is likely to attract small enough number of bidders to be (potentially) rigged and all the items within each contract (each chemical detector, each missile) must carry the same price. More generally, the forces which make strategic markets large (economies of scale and homogenous demand) also make trading and anti-trust markets large, since they increase the area in which a single price is likely prevail and reduce the number of competitors in that area. This is exactly what one should

expect, since all three market definitions are built on the same fundamentals of market supply and demand.

The differences between the three types of market definition spring from the different opportunities for trading, artificially restricting supply and surviving which arise in particular market settings. I find it hard to construct a general argument that orders these three market definitions by size. Two observations are, however, worth making. First, product differentiation drives a big wedge between the three types of market. Successful differentiation makes trading markets very small, and often too small to support a single specialized producer. On the other hand, market power is often best exploited through price discrimination exercised across a number of trading markets, and it is sustainable whenever those individual trading markets are too small to sustain a viable competitor who might undermine price structures. This observation suggests that trading markets will typically be smaller than anti-trust markets, and that some but not all trading markets will be strategic markets.¹⁵ Second, another important source of difference between the three market definitions is supply driven: the "technology" which makes arbitrage possible differs from that which underlies production or which makes collusion possible. Here I find it even harder to create presumptions ranking the different market definitions. What is clear, however, is that even if all three market definitions end up with the same list of people and places or needs and functions, they are likely to have different boundaries just because they reflect different activities which necessarily call on different skills and are undertaken in different ways.

IV. A SUMMING UP

The notion that there is a well defined "*market*" for any good or service is an artefact of the collective imagination of those interested in the buying and selling of that good or service. A market exists whenever someone can dream up a set of needs that can be profitably served through production and trade, and that means that markets exist only in the eyes of their beholders. Market boundaries are imaginary lines which we impose on reality, and we draw them to isolate certain kinds of activities from others in order to make sense and think creatively about what we observe. Where we draw the boundaries depends on why we are interested in doing so, and the first point that I have tried to make is that different users are almost certainly likely to draw different boundaries. Industrial economists are used to thinking of anti-trust authorities as their main users, but private sector agents are also interested in market boundaries and the way they think about where these lines should be drawn is a little different from antitrust authorities.

The second point that I have tried to make is that we should be interested in the way that private sector agents draw market boundaries. Thinking about "*a firm's market*" (or "*its business*") is strategically very important for a firm because it helps to identify what the firm does, what kinds of skills it should acquire and how it should structure itself. Even more important, thinking about market boundaries is important for a firm because redefining market boundaries is a fundamental part of the process of innovation. New market boundaries arise from selling the same set of products or services to new people in new places (which, in the main, results in incremental innovation), or from identifying new needs or satisfying existing needs in new ways (which is likely to be a concomitant of introducing a more radical innovation).

The third point worth stressing is that markets are places where economic activity occurs, and this means that identifying a market is about identifying a viable activity. Arbitrage is an activity, and it underlies the most commonly held market definition (that of a **trading market**). However, arbitrage requires a supporting technology, and that means that the common practice of focussing only on consumer behavior to identify market boundaries is fundamentally incomplete. A trading market is more than just a list of names or addresses: it is also a set of mechanisms which facilitate trade between them. Needless to say, the observation that identifying a market is more involved than measuring a cross elasticity applies with even more force to the identification of **anti-trust** or **strategic** markets. To meet the demand for help in identifying markets from anti-trust authorities, we need to understand what makes it easy or hard to reach, and then sustain, an agreement on price in certain circumstances. To work productively with business or corporate strategy users, we also need to know why people buy particular goods and services, and how these (and other related) goods and services are made and sold. In short, market boundaries reflect supply side forces as much as they reflect demand side factors: market definitions that focus only on consumers (people and places) are fundamentally incomplete.

NOTES

1. Scheffman and Spiller, 1987, p. 125 argue that what they call an **economic market** (I prefer the less pejorative and more descriptively accurate label of **trading market**) is "*...an area within which partial equilibrium analysis is valid*". This seems to be a particularly pertinent observation, since the common practice of writing down a particular demand curve presupposes the existence of a well defined trading market, and implicitly reflects it's boundaries.
2. See Elzinga and Hogarty, 1973, Shrieves, 1978, Harowitz, 1981, Uri and Rifkin, 1985, Stigler and Sherwin, 1985, Spiller and Huang, 1986, Slade, 1986, Scheffman and Spiller, 1987, Baker and Bresnahan, 1985, and others. For overviews of this literature, see NERA, 1992, and Morris and Mosteller, 1991, amongst others.
3. There are also private sector agents who might, in principle, be interested in such a market conception, namely market makers who construct trading markets or auctions for particular goods; for example, see the interesting discussion of some of the problems involved in creating futures markets in Carlton, 1984.
4. In fact, it is not entirely obvious that the kind of in/out distinction which is created by setting the boundaries of a market is best suited to antitrust authorities needs (although it is necessary if one is going to compute market shares). What is important is to identify the constraints on pricing which putative monopolists face, an observation which has led some to argue that market definitions do not matter: "*...it ought not matter how a market is defined. A narrow definition produces a high (market) share, but excludes forces acting on the firm from outside the market...a broad definition may embrace the forces that were external to the narrow market, but may also include products whose presence impinges little upon the firm being investigated...whatever definition is adopted, the ultimate answer should be the same*" (Hay and Vickers, 1987, p. 49); see also Fisher, 1987, p. 27, who argues that: "*...market definition is an artificial construction created by antitrust litigation*", meaning (I think, and incorrectly I think) that it is for this reason not worth doing.
5. Needless to say, antitrust market boundaries can get very murky when products are differentiated; for a discussion, see Hausman et al, 1992, Shapiro, 1996, Werden, 1996 and others.
6. Firms do not compete only by price, and antitrust authorities are often willing to tolerate some degree of market power over price if it is thought likely to stimulate innovation. Under these circumstances, it may be important to identify the group of firms who compete with each other through R&D, sometimes referred to as an **innovation market**. See Gilbert and Sunshine, 1995, and, for a critique, Rapp, 1995.
7. The 1992 DOJ Horizontal Merger Guidelines suggest that markets might be defined around the possibility that a hypothetical monopolist could impose a discriminatory price increase on certain classes of customers, a procedure which clearly would make **antitrust markets** much larger than **trading markets**. For some critical remarks on this proposal, see Hausman et al, 1996. Similarly, Sleuwaegen, 1994, argues that the existence of multi-market oligopoly is likely to increase the boundaries of an **anti-trust market**.

8. See Porter, 1980, who distinguishes between "*cost leadership*", "*differentiation*" and "*niche*" strategies. "Generic" in this context basically means "mutually exclusive", and Porter argues that firms that try to follow more than one of these strategies simultaneously get "*stuck in the middle*".
9. Hence, one of the more influential strategy books of recent years puts the problem of redefining markets near the top of manager's strategy agenda, urging its readers to: "*...abstract away from traditional product and service definitions and focus on underlying fundamentals*" (Hamel and Prahalad, 1994, p. 85). See also Markides, 1997, for a stimulating discussion.
10. Swann, 1993, contains an illuminating application of this idea to the software market designed to explore why competitor perceptions are not always transitive. His argument is that a firm's competitors are the firms who are their customers second choice, and, depending on customer valuations of particular product characteristics, this may not be reciprocal; i.e. firm i may perceive j as a competitor (because j is its customers second choice) while j does not perceive i as a competitor).
11. Those familiar with the marketing literature will not (I understand) find this approach to market definitions very unusual. For example, Day et al, 1979, define: "*... a product market as a set of products to be substitutes within those usage situations in which similar patterns of benefits are sought, and the customers for whom such usages are relevant*" (p. 10), and then discuss a variety ways of analysing market generated or judgemental data in this spirit.
12. Kay, 1990, amongst others, distinguishes between "*markets*" and "*industries*" as a way of keeping market definitions based on people and places conceptually distinct from market definitions based on technology or other supply side factors.
13. For an interesting discussion of the rise of Sear's mail order business in the US which, amongst other things, makes it plain that the firm's business was whatever could be sold by mail order, see Tedlow, 1996.
14. There may be a third. Brooks, 1995, proposes what he calls "*an enactment view*" which "*...attempts to determine the likely geographic limits to managers attention to the competitive dimension of their firm's environment*" (p. 536). Although one can think of situations in which ascertaining what a particular manager thinks his market is might be interesting, it is not clear what role this type of subjective market definition would contribute to strategy formulation. That is, it is not clear that market boundaries drawn up in this way would be anything other than event driven, reflecting "*what is*" but never casting useful light on "*what if*".
15. Many people believe that trading markets are typically rather small, not least because it is not uncommon to encounter wide price dispersion in apparently homogeneous goods industries; for some evidence from the US on industries like roasted coffee, corrugated boxes, ready mixed concrete and others, see Roberts and Supina, 1996.

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