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A Presentation on Market Definition

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It is a great pleasure to be with you on this important, very full day; thank you for including me—I only wish I could be there in person. You are taking on many important issues in competition policy today, and I applaud you for doing so

One of those issues is market definition, and I've been asked to talk about the reference paper on that subject that I have prepared with Howard Chang and David Evans. Our paper attempts to synthesize and describe the broad consensus that has emerged among leading competition authorities, though we do note a few small points of controversy.

Before discussing our paper, though, I want to say a few words about the two important roles papers like this one play in competition authorities in the United States and abroad. First, they play an internal role, giving the authority staff guidance about how to approach the analysis of particular cases. They add structure to rule of reason inquiries, and they can be a useful part of systems for prioritizing potential cases. Second, and perhaps more important, reference papers play an external role. They give business people and their lawyers and economists guidance as to what they can expect if, and when, they find themselves appearing before the authority. This external role is very important since competition policy works mainly by deterrence rather than regulation. Reference papers can help deter anticompetitive acts by indicating that they will likely be prosecuted as well as encouraging aggressive pro-competitive actions by indicating that they will likely *not* be prosecuted.

Let me now turn to the broad consensus on market definition among leading authorities. I don't have time—and I doubt you have the patience—to go through all the methods and information sources discussed in our paper. It seems more useful on this occasion to highlight three of the key concepts we discuss: the *purpose* of market definition, the *dimensions* of market definition, and a useful *conceptual tool* for market definition.

It is perhaps most important to understand the *purpose* of market definition. Market definition is not an end in itself; it is a tool that can be useful in assessing the competitive constraints on an existing firm or on a new firm that a merger would produce. To look at the matter from the other side, market definition is the first step in the assessment of market power.

The reason why we care about market power is clear. Business practices that might be anticompetitive if done by a monopoly are much more likely to be pro-competitive if done by a firm that faces vigorous competition. Similarly, a merger that results in a firm that faces vigorous competition is much less troublesome than a merger that would produce firm with great market power.

One can think of a market broadly as the arena within which competition occurs. Market definition then involves deciding what is in that arena and what is not; it involves drawing a bright line around the arena's boundary. Since the purpose of market definition is to aid in

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assessing the economic consequences of business behavior—including mergers—it follows that market definition is fundamentally a factual, empirical exercise; it is done in leading competition authorities by economists, not lawyers. And, as I hope the reference paper makes clear, leading authorities use a variety of statistical and other information in the process of defining relevant markets.

Keeping in mind the ultimate purpose of market definition, it is important to note, as David Evans will discuss, that it is not the only tool for assessing competitive constraints and market power. And sometimes, as I will note shortly, it is not a particularly useful tool.

Now let me turn to the *dimensions* of market definition. Market definition generally starts with a product sold a single firm in one or more locations—or a set of competing products sold in various locations by firms that want to merge. Then, as I noted above, market definition is the process of drawing a bright line around those offerings that includes all the significant competitive constraints on their prices or qualities.

In the case of a single product of interest, on which I will focus from now on for simplicity, the basic question is how a customer who now buys that product might obtain a substitute if its price were increased. Thinking about the possible ways that question might be answered leads to an inquiry with two dimensions. The line that defines a relevant market will define both a set of products and a set of locations—a product market and a geographic market. And it will generally include substitutes on both the demand and supply sides of the market. This implies a two by two array with four boxes, which I'll briefly discuss in turn.

Identifying the products that are substitutes on the demand side is conceptually simple: finds those products that buyers consider good substitutes for the product of interest. But it is often difficult in practice to draw a bright line between good and bad substitutes because many differentiated products are imperfect substitutes for each other in modern markets. Dress shoes and running shoes are not good substitutes for most of us, for instance. How about running shoes and cross-trainers? Pretty close for many people who are not serious runners, I would bet. How about running shoes and high-top basketball shoes? Probably not...?

One recent U.S. case involved a proposed merger of two chains of supermarkets specializing in healthy, natural food. Were other, ordinary, supermarkets in the same market? If so, the merger would create a firm with a small market share and would not be a problem. If not, the merger would create a near-monopoly. It is hard to say that ordinary supermarkets didn't impose competitive constraints on healthy supermarkets, of course, but clearly they were not such close substitutes as other healthy supermarkets would be.

In cases of this sort, it may not make economic sense to draw a bright line, and thus market definition may not be a very useful tool for assessing competitive constraints or market power. Placing too much weight on market definition in such cases would create substantial risk of error.

Looking at the geographic market from the demand side, the central question is where buyers would travel to shop if price at their preferred location were raised. For example, because of the behavior of consumers and small businesses, retail banking markets in the United States are generally found to be relatively small; certainly no larger than a single major metropolitan area.

Now let us consider supply-side substitution involving both products and locations. Here we encounter what might seem to be an element of controversy. In merger cases, the U.S. authorities don't consider supply-side substitution in market definition, while the Europeans do. On the other hand, the U.S. authorities do consider the impact of supply-side substitution on market power after they have defined the relevant market. They would not generally reach different conclusions about market power, as I illustrate below, and it seems more natural to consider both supply-side and demand-side factors from the outset.

The central supply-side question in product market definition involves identifying those firms, if any, that do not currently sell a good substitute for the product of interest but that could do so fairly quickly in response to a price increase in the product of interest. To go back to shoes, firms that only produce running shoes could probably also produce basketball shoes. If so, they would be in the same product market with basketball shoe producers.

My favorite example of supply-side substitution is left- and right-handed golf clubs. They are clearly not substitutes in demand, but it would likely be tough to raise the price of left-handed clubs very much without inducing makers of right-handed clubs to begin supplying left-handed clubs. It thus seems most natural to me to make the product market golf clubs. The U.S. authorities would presumably consider left-handed golf clubs to be a relevant market but would then notice that the market power of producers in that market would be tightly constrained by the ability of right-handed golf clubs to produce left-handed clubs quickly and at scale.

To assess the geographic dimension of supply-side substitution, one looks at shipping patterns and shipping costs and at trade barriers. Even though U.S. consumers rarely travel far to buy shoes, for instance, shoes are imported into the United States from all over the world and shipped all around the country, so the relevant geographic market may well be global. Similarly, even though little gasoline is shipped from Boston to New York today, the costs of doing so are low enough that it would probably be wrong not to include them both in the same geographic market for gasoline.

All competition authorities also consider the competitive constraints imposed by potential new entry in assessing market power, but they do it separately from market definition. New entry, as opposed to changing shipping patterns or making minor changes in product design, generally takes considerable time. Moreover, it is generally not possible to say anything quantitative about the scale of potential entry to compare with market shares, for instance.

For instance, MIT is located in Cambridge, right next to Boston. There is only one good ice cream shop near MIT, and good ice cream cones near MIT might be a relevant market because neither ice cream cones nor ice cream consumers travel far. But before deciding that the shop near MIT had great market power, one would have to note that its pricing is constrained by the fact that there are many other good ice cream shops in the Boston area that could easily set up branches near MIT, though it is not clear how large their shares would be nor exactly how long it would take them to enter.

Third, and finally, the hypothetical monopolist test provides a useful conceptual tool that in principle pulls together all the pieces I have just discussed. The test is applied to a proposed market definition and asks whether a hypothetical monopolist that controlled all the prices within the proposed bright line could increase its profits by raising all those prices by a "small but significant and non-transitory" amount. The quoted phrase is often reduced to its acronym, SSNIP, and this test is often called the SSNIP test.

The idea here is simple: if even a monopolist couldn't profitably raise prices in a proposed relevant market, that proposal must omit some significant competitive constraints, some important demand-side or supply-side substitutes, so the proposed market definition is too narrow. Once the market definition is widened enough that a monopolist could raise prices, the products outside the line aren't significant competitive constraints and can be ignored.

While this test is useful conceptually, particularly for mergers, applying it rigorously requires quantitative information on buyers' responses to price increases. Thus it does not solve the hard problems often caused by product differentiation, as in my supermarket example; it simply poses them clearly. This test also neglects non-price competition, which is often important, and, it is argued, it sometimes leads competition authorities to give too little weight to the effects of potential entry.

I'll stop here. There is a lot more about all these concepts and their implementation in our reference paper, which I hope is both reasonably clear and ultimately useful. I am pleased that you asked my colleagues and me to prepare this paper and, as I said at the outset, I very much appreciate being able to participate in this important day—albeit only electronically!