
# Market definition: the economic approach

*Luigi Prosperetti , Professor of Economic Policy,*
*Faculty of Law, University of Milan*

Invited Paper at the
Association of European Competition Law Judges Conference,
Rotterdam, 15 June 2007

# Summary

- Market definition is the keystone of any antitrust analysis, whether it concerns mergers, agreements, abusive conduct or State aid. Once the relevant market is defined, it is usually relatively straightforward to evaluate market power, analyse conduct and assess distortionary effects.
- The legal analysis of such issues, over time, has increasingly drawn upon economic analysis, and this has brought unquestionable benefits, in terms of efficiency, consumer protection and (by and large) legal certainty. However, an economist feels that sometimes economic principles may be applied more thoroughly, especially when cartels or abusive behaviour are concerned.
- In order to show this, I will: (i) summarise the standard doctrine of market definition, showing how such a tool is very useful, but should be handled with care in some cases; (ii) discuss a few key implementation problems of the standard doctrine, mainly from a 'how to' perspective, (iii) outline a relatively new development in economics, which should be probably considered by competition Judges when evaluating some 'two-sided' markets.

# Market definition: uses and limitations

# The uses of market definition

- As the Commission clearly states "*Market definition is a tool to identify and define the boundaries of competition between firms. …The main purpose of market definition is to identify in a systematic way the competitive constraints that the undertakings involved*" [Commission Notice on the definition of the relevant market for the purposes of Community competition law].

- In practice, market definition serves different purposes when addressing different competition issues: in mergers, it allows to identify the competitive constraints that the merged entity, and its competitors, will face, and so to anticipate their future behaviour; in abusive conduct cases, it allows first to assess if a firm should be considered as dominant, and secondly to evaluate the consequences of its actions upon customers and (possibly) competitors; in cartel cases it makes it possible to evaluate if the agreement should be considered as horizontal or otherwise, and again to evaluate its consequences; in State aid cases, it serves mainly to evaluate the distortionary consequences of State intervention.

- In civil and administrative courts, the more complex market definition issues are likely to arise in abusive conduct cases, upon which I shall mainly focus here.

# Typical steps in the analysis of the relevant market

- Demand side: evaluate the degree of substitutability of product A, with other existing products, from the point of view of demand, possibly via a SSNIP test (demand substitutability).
- Supply side: assess the likelihood that existing suppliers will readily begin offering substitutes to A (supply substitutability).
- Supply side: assess the likelihood that new suppliers will begin offering substitutes to A in a reasonably short time period (potential supply substitutability).
- Demand substitutability is usually taken as the fundamental criterion, and supply substitutability as the secondary criterion. But "*potential competition, is not taken into account when defining markets, since the conditions under which potential competition will actually represent an effective competitive constraint depend on the analysis of specific factors and circumstances related to the conditions of entry. If required, this analysis is only carried out at a subsequent stage, in general once the position of the companies involved in the relevant market has already been ascertained, and such position is indicative of concerns from a competition point of view*" [Commission Notice].

# Does this make economic sense?

- Broadly it does: the basic reason for assigning priority to the demand side is that generally customers can switch their demand more quickly, and bearing lower adjustment costs, than competitors may switch supply.
- But this is not necessarily always the case: in several types of economic activities, entry can be very fast, through trade, existing delivery channels, or electronic channels, and thus potential entrants should be included in the relevant market. Their traditional exclusion in EC competition rules probably reflects a sort of 'manufacturing bias', i.e. the view that, in order to enter a market, large investments in productive facilities are necessary: but of course this is not always the case.
- In practice, this two-stage analysis may lead to underestimating the role of potential suppliers (this is less likely in the U.S., where potential supply is directly considered when the relevant market is defined).
- In any case, the speed of entry by new suppliers may matter much less than the expectation that entry may occur: if the rational producer of A expects that, if it practiced a SSNIP, producers of B would start producing A in three years, it will never increase prices. A threat of entry tomorrow has a disciplinary effect today: A and B already pertain to the same relevant market.
- A further caveat regards specifically the analysis of demand substitutability which – in a civil Court – may pose specific problems: as we shall presently see, in these cases, the SSNIP test should be applied with some caution.

# SSNIP is not always a useful test (1)

- The standard procedure for identifying a relevant market has been historically developed for the forward-looking analysis of mergers [1992 Merger Guidelines of the U.S. Department of Justice]. While it fits well the task of foreseeing if a merger between competitors is likely to raise prices in the future, it may show critical weaknesses when applied in cartels or price abuse cases.
- The first problem derives from the so-called *cellophane fallacy* [after the *du Pont de Nemours* 1956 U.S. Supreme Court case]: giving a lighter example, if people substitute brioche for bread, this may mean that both products are in the same relevant market (as Marie Antoinette, reportedly, haplessly suggested), but it could also be an artefact of a bread producers' cartel, which has increased the price of bread so much that it is quite close to the price of brioche. This makes consumers unhappy, but ready to substitute brioche for bread.
- Thus, a high substitutability can be just a consequence of a cartel or of an abusive conduct which has increased prices.

# SSNIP is not always a useful test (2)

- In order to avoid such a fallacy, the Court should in theory try to assess how customers would behave if the price was not artificially raised by the cartel, but instead close to its 'competitive' level. Of course, this is often impossible in practice: while it may be possible somehow to gather what would be the 'competitive' price level, no survey would ever reveal how consumers would really behave at that price. On the other hand, no purely speculative analysis may provide any substantial insight.

- It is then often more useful, in such cases, to assess dominance observing past behaviour: if the company being analysed was able to pass-on to customers an exogenous increase in input prices, and/or to increase - over a substantial period of time - its price relative to that of some *prima facie* substitutes, and/or to enjoy a profit rate (i.e. compared to capital invested) permanently above that of comparable firms, possibly in other geographical markets, and there are no other reasonable explanations for such stylised facts, then dominance may be inferred.

# SSNIP is not always a useful test (3)

- The cellophane fallacy is a very well known problem, but there is another weakness of the SSNIP test which is actually more relevant in practice: while the standard SSNIP test asks what would happen if an undertaking increased prices by 5 or 10%, there is abundant evidence that cartels increase prices by 20 – 30% [Connor J.M., 2005, *Price–fixing overcharges: Legal and economic evidence*, Purdue University Staff Paper].
- Thus, standard SSNIP tests are likely to define markets which are too small: consumer may not switch to apples if pears' prices rose by 10% (hence they would seem to be in different relevant markets), but may behave very differently if prices rose by 30%: apples and pears may be in the same market, after all.
- The risk of defining markets which are too small may be tolerable in a merger case, where a Competition Authority is understandably more averse to type-I errors (define markets which are too large, and so make unilateral and/or coordinated effects more likely), than to type-II errors (do the opposite).
- However, in a civil case, the Court will probably be equally averse to both types of errors, and thus should consider SSNIP tests which have been run with higher price increases (say 20-30%, instead of 5-10%): otherwise, it may find dominance where none actually exists.

# Market definition: a round-up

- Market definition is often the most important step in antitrust analysis. It should thus be undertaken with special care, fully taking into account the type of legal proceedings in the course of which it is undertaken. In particular, care should be exercised when using the SSNIP test.

- In any case, when market definition seems to pose difficult problems, one should always keep in mind that "*Market definition is a tool to identify and define the boundaries of competition between firms. …The main purpose of market definition is to identify in a systematic way the competitive constraints that face the undertakings involved*" [Commission Notice]. Therefore, it may be convenient in some cases to proceed directly to analyse the existence of a dominant position, without spending excessive resources on a precise definition of the relevant market.

- However, in many cases, an explicit market definition may be a necessary step, and thus I now turn to discuss a few implementation problems, trying to focus to those that are likely to arise in Court, rather than in proceedings in front of a Competition Authority.

# Market definition: how to do it

# How to do it: the demand side (1)

- To many economists, the best way to define a relevant market is to build an econometric model in order to estimate demand cross-elasticities (if the demand for beer increases substantially with an increase of the price of wine, then wine and beer most likely belong to the same relevant market).
- But the extent to which an econometric model may be deemed to provide acceptable legal evidence largely depends on the type of Court: it certainly does during an antitrust proceeding, where economists abound on all sides of the table, it may in front of a civil Court (generally depending on procedural rules concerning: evidence, cross-examination of experts, appointment of court's experts etc.), it may not in front of an administrative Court, which in many jurisdictions is reluctant, or unable, to delve into the facts of the case.
- On more general grounds, assessing the validity of an econometric model is very difficult, and thus such models are perhaps able to provide useful evidence only where experts can be thoroughly cross-examined, or the Court is able to rely upon a highly competent econometric expert.

# How to do it: the demand side (2)

- In most cases, if there is no risk of a cellophane fallacy, SSNIP test is best, but it is striking how rare in practice are *real* SSNIP tests, conducted on the basis of market research.
- In most consumer goods and services, any reputable market research company is able to run a survey in about two weeks for 2-3.000 euros: there is really no excuse for the convoluted prose we read in many cases, where the test is 'performed' through a mainly abstract analysis.
- A *real* SSNIP test is in particular utterly indispensable when products are highly differentiated: it is likely that qualitative evidence may assist in forming a reasonable expectation of how customers of an undifferentiated product (say, UHT milk) would react to a SSNIP, but how would customers react (say) in the case of a mobile phone? And how would they react to a change in one of the product's characteristics?
- Presumably, some will switch but not others, and market definition will depend on the size of the *diversion ratio*: if the share of switchers in total demand is sufficient to make unprofitable the SSNIP, we need to broaden our initial market definition. In order to assess this, we need real data, based on real tests. Purely qualitative analysis would be here of little use.

# How to do it when demand is elusive (1)

- In some cases demand is elusive. Pharmaceuticals are a good example, as patients rarely express a ‘demand’ in an economic sense, as they do not generally choose a drug, nor pay its full price.
- In such cases, often Competition Authorities and Courts rely upon various criteria, such as product characteristics or functional interchangeability, but these rarely lead to clear-cut conclusions: in pharmaceuticals, some antitrust decisions are based on the third level of Anatomic Therapeutic Chemical (ATC3) classification, and some on ATC5, but it is often difficult to find an adequate discussion of the reasoning followed.
- There are, however, economic solutions to these problems.
- For drugs used in hospitals, there are often data which allow to calculate the frequency with which alternative drugs are actually prescribed for a given condition, giving us some idea of the ‘market share’ of each of them, and this may provide some idea of the ‘market power’ (in the broad sense) of each drug.

# How to do it when demand is elusive (2)

- For drugs sold in pharmacies we rarely have data concerning doctors' diagnoses, so the above approach cannot be followed.
- However, we may often be able to obtain:
  - data concerning prices and sales in different countries of the drugs which may be included in the same market, and this may give us some clues concerning substitutability;
  - data concerning prices and sales on a given market for a number of years, during which prices and quantities have changed, and this may provide the basis for analysing substitution patterns with the help of an econometric model.
- In any case, it is generally dangerous to rely upon qualitative data alone when defining a relevant market: the lesson arising from several antitrust cases concerning pharmaceuticals is that otherwise, quite often, the relevant market ends being defined in a very narrow way.

# How to do it: the supply side

- As discussed above, actual and potential supply-side substitutes should be carefully considered: on the latter, it may be sometimes useful to depart from the cautious approach of the Commission, by including them directly in the relevant market.
- Market intelligence and financial analysts' reports may be very useful here, as these two sources make it their trade to look forward to potential competitive threats.
- On the other hand, most of the views that may be gathered from market participants, suppliers and customers should be taken with care, as they might suffer from 'antitrust gaming', i.e. from the attempt to convince the Court of a thesis particularly useful to the responding party.

# A new development: two-sided markets

# One-sided vs. two-sided markets

- When defining markets, it is also useful to consider in some cases a (relatively) recent microeconomic result: markets may have two sides.
- Consider the printed media industry, where there is a large number of antitrust decisions by the EC and NCAs that define markets in a very narrow way, on the basis of frequency, content, and geographic area, because they (correctly) assume that there is very little demand substitution because different media appeal to different groups of readers.
- But very few media executive would subscribe to this view. Printed media sells both copies to customers, and space to advertisers. Thus if I increase the price of my local newspaper, relatively few readers will switch to the national press. But the loss in readers might be sufficient to trigger a loss in advertising revenues.

# Features of two-sided markets

- Thus, a printed media company operates in two highly related markets or (as economists put it) in a two-sided market: in order to stay in business it must sell copies to readers (say, at a price P), and space to advertisers (say, at a price S).
- A fundamental characteristic of two-sided markets is that no inference about market power or abusive behaviour may be made considering only one of the two prices: P may be high or low (it is zero for the 'free dailies'), S may be high or low (it is zero for publications containing only classifieds): what really matters is not price levels, but rather price structures i.e. both P and S.
- In particular, SSNIP tests applied only to one of the two sides of these markets generate incorrect results: a newspaper may seem to be a market to itself from the perspective of the people who buy its copies, but is probably in a much broader market when we consider that it draws its revenue also from advertisers.
- If we omit to consider this basic feature of such a market, several errors may result: relevant markets may be too small; dominance may be found, where none actually exists; price abuses may be found, where none exists (e.g. price discrimination concerning only one side of the market).

# Conclusions

- Market definition is a mean to an end: it is a tool that usually provides a useful step in identifying, in a systematic way, the competitive constraints that a firm faces. When it may provide misleading information (as in price abuse cases), it should not be utilised.
- When it is, especially in front of a civil Court, it should be based upon sound evidence, such as that provided by real SSNIP tests and, or, market intelligence.
- Special care should be exercised when market are two-sided: treating them as one-sided markets easily leads to incorrect results.
- In general, economic analysis will always be useful, as it will assist in defining the economic boundaries of competition among firms.