Market Definition in Oligopolistic and Vertically-Related Markets: Some Anomalies

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"My lament is that this battle on market definition … has received virtually no attention from us economists. Except for a casual flirtation with cross elasticities of demand and supply, the determination of markets has remained an undeveloped area of economic research at either the theoretical or empirical level."

George Stigler (1982) The economists and the problem of monopoly.

Introduction

Although written in 1982, the above lament from the Nobel Prize winning economist George Stigler resonates as deeply today as it ever did. Market definition, the hybrid offspring of antitrust policy and industrial organisation economics, remains a difficult and widely misunderstood topic. Paradoxically this is at least partly because everybody except economists thinks that it is easy!

In this brief article we discuss two fundamental but little noticed 'anomalies' in market definition, which in our view contribute greatly to the confusion which currently surrounds the subject, and possibly explains why so few economists have been willing to devote their time to it.

The first anomaly has to do with what we term the *'oligopoly problem'* in market definition. Here we ask, 'What question is market definition trying to answer?' If the purpose of market definition is to identify those firms which are potentially able to exercise 'market power,' then it is a redundant step in competition policy investigations, which leads to logical absurdities, and should be eliminated. A well-posed market definition question however can restore its usefulness.

The second 'anomaly' relates to market definition in vertically-related and imperfectly competitive markets. We argue that even a well-posed market definition question may be virtually impossible to implement in such settings. However at least a well-posed question tells us which question we would like to answer if the market data permitted it, which is a step in the right direction.

Market Definition or Market Power?

Since Stigler's article was published in 1982, numerous competition authorities have specified the approach they take to market definition through the publication of 'guidelines' and occasional research reports by consultants. The starting point of all of them, as Bishop (1998) points out, is the by now familiar 'SSNIP' test. As described in the US Department of Justice and Federal Trade Commission (1992) *Horizontal Merger Guidelines* this test is:

'A market is defined as a product or group of products such that a hypothetical profit-maximizing firm that was the only present or future producer or seller of those products would impose at least a small but significant and nontransitory increase in price (SSNIP), assuming the terms of sale of all other products are held constant. A relevant market is a group of products and a geographic area no bigger than is necessary to satisfy this test.'

When the SSNIP test was first proposed in the 1982 Department of Justice merger guidelines, it was broadly welcomed by economists,[1] and most discussions of market definition since that time assume that we should take this test as our starting point. Most also now recognise that we should avoid committing the so-called 'Cellophane fallacy' as described by Schmalensee (1987) and Fisher (1987).[2] If the product in question is already being supplied by a monopolist, and a monopoly price

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1   For instance, Schmalensee (1987), Fisher (1987), and Willig (1991). See NERA (1992) for further references to the literature.

2   C.f. Office of Fair Trading (1998)

being charged for it, then *by definition* no further price increase will be profitable, although the product might indeed have been defined as a 'market' if a lower price had been taken as the starting point for analysis. Implementing the SSNIP test from the current monopoly price will lead us to define the relevant antitrust market too widely, and we will incorrectly conclude that a monopolist has no market power. The solution to this of course is to take the 'competitive' market price as the starting point.[3]

Avoiding the 'Cellophane fallacy' is far from the only problem however, and market definition guidelines, even when explicitly based on the SSNIP test, leave open considerable room for interpretation and disagreement. A basic issue is the purpose of the market definition exercise itself. One interpretation of market definition is that its goal is to identify *those firms or producers which possess market power, given the market behaviour of potential competitors.* This is the view taken for instance, by Grimes (1999) who states that, *"market definition is, of course, merely a surrogate for determining whether the defendant possesses market power."*[4] Another interpretation, however, is that market definition seeks to identify *the smallest group of firms or producers who would possess monopoly power, independently of the market behaviour of potential competitors.* These definitions are closely related, but they are not asking precisely the same question.

The easiest way to see this is to take a simple example. Consider two duopolists producing a perfectly homogeneous, and hence perfectly substitutable, product under identical cost conditions. For instance, ordinary table salt. Both firms will typically charge prices well in excess of marginal cost in the duopoly, e.g. Cournot, equilibrium, so either firm has *market power given the market behaviour of the other firm*. Neither firm has *monopoly power,*

however, since if one firm sets its price equal to marginal cost (e.g. in a Bertrand equilibrium), the other firm will lose *all* of its customers if it attempts to charge any price higher than this. If we call these firms Firm X and Firm Y respectively, then under the first interpretation of market definition given above, both Brand X Salt and Brand Y Salt would be separately defined as relevant antitrust markets if the duopoly equilibrium was 'Cournot-like', while neither would be defined as a relevant antitrust markets if firm behaviour was 'Bertrand-like'. This is a simple illustration of the 'oligopoly problem' in market definition

The 'oligopoly problem' is closely related to the 'Cellophane fallacy' however the error is in the opposite direction. If we ask whether a hypothetical monopolist producer of Brand X table salt could profitably impose a price increase (i.e. a SSNIP) above the competitive price level '*assuming the terms of sale of all other products are held constant'* we may well find that the answer is in the affirmative (e.g. in a Cournot equilibrium), and mistakenly infer that Firm X is a monopolist rather than an oligopolist. That is, we will have defined the relevant antitrust market too narrowly and we will thus ignore the potential competitive constraint on Firm X's prices imposed by the pricing behaviour of Firm Y. Firm X may well possess 'market power' in the duopoly equilibrium, but it is not a 'monopolist'. If our purpose in defining relevant markets is simply to identify firms with market power then it may not appear to matter very much if we distinguish *market* power from *monopoly* power in market definition. However if this is the aim then it is far from clear why we should undertake a market definition exercise in the first place. A monopoly or merger inquiry should proceed immediately to asking whether the firms or firms under investigation are able to exercise significant market power. The answer to this question, as Franklin Fisher has repeatedly reminded us, does <u>not</u> depend upon how markets are defined.[5] If market definition really is 'merely a surrogate for determining whether the defendant possesses market power,' then there is no rationale at all for defining relevant antitrust mar-

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3   Werden (1992) and others have argued that in merger cases at least, the current market price is the correct starting point. We agree with Schmalensee (1987) and Fisher (1987) on this issue, however it makes no real difference to the discussion which follows.

4   A view echoed by Kaserman and Zeisel (1996) who tell us that a market is 'the smallest set of firms possessing potential market power.'

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5   Fisher (1987)(1979)

kets as a preliminary step in a monopoly or merger investigation.[6]

Market Shares and Market Power

If market definition is a *step* in the process of identifying firms which are able to exercise significant market power, then it must be asking a different question. Monopoly and merger inquiries usually proceed in three steps or 'stages':

1) Defining the relevant markets
2) Calculating market concentration ratios or firms' market shares, and
3) Inferring from market share information which firms are likely to possess market power.

As the UK Office of Fair Trading (1998) have put it, *'market definition is an important first stage in any investigation. Market shares can only be calculated after the boundaries of the market have been defined.'* And as NERA (1992) tell us, *'any use of market shares must be founded on some definition of the relevant market. If the market is wrongly defined, then all subsequent analysis based on market shares or market structure is flawed.'* It is here that the standard SSNIP test runs into trouble from the 'oligopoly problem'.

Continuing with our 'salt' example, it is evidently both circular and nonsensical to define Brand X table salt as a relevant antitrust market because Firm X is able raise its price above competitive levels *given the market behaviour of Firm Y*, and then 'infer' from Firm X's market share that Firm X does in fact have market power! Market shares calculated in this way contain absolutely no new information. Most market definition guidelines, based on the standard SSNIP test, invite us to follow this circular path of argument however. To illustrate with another example, this time with differentiated products, suppose there are just two brands of 'track shoe' available, 'Adidas' and 'Nikes'. Sports fans view them as sufficiently close substitutes so that it is never profitable for the

Nike Company to price its track shoes more than a few pennies above the price of Adidas. Hence if Adidas are priced at marginal cost, the Nike Company must follow suit and earn negligible profits. If, in the duopoly equilibrium, Adidas prices are well in excess of marginal cost however, then Nikes, to paraphrase Schmalensee (1987), are '*something worth monopolising'.* That is, the Nike Company has market power. We suspect that most readers will agree with us that 'Nikes' should not therefore be defined as a relevant antitrust market, although following the standard SSNIP test would lead us to this conclusion.

It is important to emphasise that there is more at stake here than mere semantics. It is logically circular and economically incoherent to define 'Nikes' as a relevant antitrust market because the Nike Company has market power given the pricing behaviour of the Adidas Company, and then to deduce that as a 'Nike monopolist' the Nike Company has market power. We have already answered the question at issue by carrying out the SSNIP test. Calculating market shares serves no useful purpose.

In their report to the Office of Fair Trading, NERA (1992) briefly recognised the 'oligopoly problem' in their discussion of an example of 'price leadership,' and noted the meaninglessness of market share analysis as a consequence.[7] The price leadership example has received attention elsewhere in the literature. Kaserman and Zeisel (1996) for instance tell us that:

"In a dominant firm/competitive fringe model, the largest producer or group of producers might have considerable price-setting discretion even though the supply response of the competitive fringe will also effect the final established price. In this setting the dominant group by itself may constitute an antitrust market…."

Kaserman and Zeisel (1996) are correctly following the logic of the standard SSNIP test, but what they

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6   Fishwick (1986) is not alone in suggesting that market definition may be neither a necessary nor a useful step in competition policy investigations. We broadly concur. However since all competition authorities feel that they must define relevant antitrust markets, it is important that it is done coherently.

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7   NERA is not the only consultancy firm to have run onto the oligopoly problem. As reported by the Office of Fair Trading (1996): "*BSkyB advised by the economics consultancy Lexecon, argued for a wide market definition. It argued that it was a circular argument whether the Office established a narrow or a wide market definition to infer that BSkyB had market power, or whether establishing that BSkyB had market power inferred that the market was narrow or wide. Lexecon followed the second route.*"

fail to note is the redundancy of market share or concentration analysis as a consequence. By definition, since the dominant group has 'price-setting discretion', their output alone constitutes a relevant antitrust market. Further, the dominant group must be the *smallest* set of firms with 'price-setting discretion', since if any subset of the dominant group had 'considerable price-setting discretion' then the output of that subset alone should have been defined as a relevant antitrust market. According to the standard version of the SSNIP test in other words, *all firms with market power are monopolists.* Any firm or group of firms with market power by definition has 100% of the relevant antitrust market. Likewise, by definition, any firm with less than 100% of the relevant antitrust market cannot have market power. There is no role at all for market share analysis in this set-up.

To take a final illustration from a recent merger inquiry, the European Commission decided in the 'Airtours' case that the relevant antitrust market was the "*UK market for short haul foreign package holidays,*" and thus eliminated from consideration potential competition from domestic holidays, non-package foreign holidays, and long haul package holidays. If the Commission had reached this view on the basis of the SSNIP test, taking the possibly oligopolistic prices of other holidays as given, then a finding that the three or four largest firms in the short haul foreign package holidays market, with about an 80% market share, are 'collectively dominant,[8] is either tautologous or wrong, depending upon your viewpoint.

It is tautologous because the SSNIP test has already told us that a hypothetical monopolist of *short haul foreign package holidays,* given the prices of everything else, will be able to raise prices above competitive levels. It is wrong because if firms with only 80% of the 'market' are able to increase prices via parallel or collusive conduct, then the antitrust market should have been defined more narrowly to include just their output.

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8   That is, will be able to raise prices above competitive levels via implicit collusion or 'parallel pricing behaviour'.

Untying the Knot

In their report for the UK's Office of Fair Trading, NERA (1992) point to this troubling circularity in the standard approach to market definition:

  "If the notion of the antitrust market is to be the narrowest set of goods or services whose control by a single supplier would be susceptible to <u>uncompetitive pricing</u>, it follows that only a firm with 100% of that market so defined would have power to raise price to uncompetitive levels. Any firm with less than 100% could not have <u>monopoly power</u> because if it did the antitrust market should have been defined to include just that firm's output."

Note the conflation of the terms 'uncompetitive pricing' and 'monopoly power' in this statement, which is, of course, at the root of the problem. NERA correctly suggest that one way around the circularity problem is to assume that suppliers of 'excluded' products would 'seek to compete' with the 'hypothetical sole supplier.' However they then mistakenly conclude that this is equivalent to holding the prices of the other goods constant. This simply takes us back to where we started from! If market definition is to be a step in the process of identifying those firms which potentially possess market power, then it runs into logical difficulties if it is simply asking this question directly. The question which market definition should be asking is not which firms potentially possess *market power*, but which (hypothetical) firm would possess *monopoly power*, i.e. the power to raise prices above competitive levels independently of the behaviour of potential competitors. This means that we should rewrite the SSNIP test as follows:

'A market is defined as a product or group of products such that a hypothetical profit-maximizing firm that was the only present or future producer or seller of those products would impose at least a small but significant and nontransitory increase in price (SSNIP), above the competitive price level, assuming that all potential substitute products are sold at competitive market prices.

A firm which can profitably increase its price significantly when all potential substitute products are priced competitively (e.g. at marginal cost) is unambiguously a monopolist rather than an oligopolist. This version of the market definition test defines antitrust markets solely in terms of consumers' preferences at competitive price levels, and therefore does not depend upon the *actual* market behaviour of any firm. Market share analysis, although an imperfect diagnostic device at best, can then at least be given meaningful content.

Defining markets in this way may be intellectually coherent, but it is clearly difficult to implement in practice. It requires knowledge of the demand curve for a product at prices which are not observed in the market, whereas the standard version of the SSNIP test only required knowledge of the demand curve around existing prices.

Nevertheless only our second version of the test will prevent us from identifying two producers of a perfectly substitutable and homogeneous good (e.g. salt) as being monopolists in their respective salt markets.[9] And this version alone allows market shares to be calculated and used in a meaningful way.

Market Definition in Vertically-Related Markets

In vertically-related markets, application of even a well-posed market definition test is far from straightforward. This is particularly true where there is imperfect competition at more than one level in the vertical supply chain. With more than one potential monopolist in the vertical structure for example, it can be impossible to determine exactly where the market power lies solely through observing market data, or to untangle the effects of market power at different levels in the supply chain. As we shall see, this can make market definition a treacherous undertaking.

To illustrate the issues we discuss the following highly stylised example, however the implications extend far beyond such simple cases.[10]

Consider an industry in which there is a single upstream monopoly producer M and a downstream monopoly retailer, or distributor, D. M can only make sales to final customers by first selling to D. We assume that M's product is highly profitable, so that the monopoly price p^m charged by the monopoly distributor D to final customers is well in excess of the total costs of producing the monopoly quantity x^m and distributing it to final consumers. We let p^m denote the monopoly profits earned by selling x^m units of M's product at the monopoly price p^m.

Since M has only a single downstream buyer D for his product, the payment he receives for x^m units of output will depend upon the outcome of negotiations between M and D.[11] This is a *two-person bargaining game* with many possible solutions, all of which can be represented by the monopoly producer M receiving a fraction ap^m and the monopoly retailer D receiving a fraction $(1-a)p^m$ of the total monopoly profits.

This division of profits can be implemented by assuming that the M charges D a marginal, or per unit, price equal to upstream marginal cost and negotiates a share of the profits p^m, which are net of all marginal manufacture and retailing costs. To keep things simple denote M's marginal cost by c, and assume that D's marginal costs are zero.

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9   Like the reader, we suspect that such obvious mistakes would rarely be made. However Fisher (1979) gives an example of a case in which the US Federal Trade Commission defined a relevant antitrust market as 'the market for nonethnic, high-priced, frozen entrees.' He invites his readers to pause and take this in before reading further.

10   We follow closely the nomenclature and notation of Vickers (1996) in this example, to assist comparison, and to allow the reader to consider the implications of our discussion in some of the more complex vertical settings described in that paper.

11   Since we allow for non-linear pricing, the downstream monopoly profit will not depend upon the division of this profit between retailer and producer, i.e. there is no 'chain of monopolies' or 'double marginalisation' problem. See Hart and Tirole (1990) and Vickers (1996) for further elaboration.

One possible solution to this bargaining problem is for M to make a 'take it or leave it' offer to D and receive a 100% share of p^m (i.e. a=1); another is for D to make a 'take it or leave it' offer to M and receive a 100% share of p^m (i.e. a=0). Typically we would expect the bargaining solution to lie somewhere between these two outcomes (i.e. 0<a<1) depending upon the 'parameters' of the bargaining situation, and possibly upon the 'bargaining skills' of the parties.

But the question of concern here is not *which* agreement will be reached between the two vertically-related monopolists, but whether the approach taken to market definition should be allowed to depend upon whatever bargaining outcome actually occurs. And if so, for which values of a should we define the product produced by M, or downstream distribution supplied by D, as relevant antitrust markets?

The question arises because a competition authority investigation into the potential for abuse of monopoly power by M would presumably ask whether M was able to profitably increase the *wholesale* price of his product significantly above competitive levels for a sustained period of time. Observing that M receives a payment equal to cx^m + ap^m for supplying the quantity x^m, the answer would then depend upon the value of a. Similarly, an investigation into market power in distribution would ask if D could profitably increase price so as to achieve a high 'retail margin'. Observing that D receives a 'gross margin' of p^m on x^m units, but pays input costs of cx^m + ap^m, the net retail margin is just $(1-a)p^m$. Whether this is 'high' or 'low' again depends upon a.

For values of a not much in excess of zero, we might conclude that M is not a monopolist, or equivalently that M's product does not constitute a relevant antitrust market, because M is unable to achieve high profits, and place all of the responsibility for high consumer prices on D. For values of a not much less than one we might conclude precisely the opposite, i.e. that M is a monopolist but that downstream distribution is quite competitive. These conclusions would likely be reached if we followed Werden's (1992) suggestions on implementing market definition in vertically-related markets for

example. Neither conclusion is correct of course.

To see this note that introducing more competition at *either level* in the vertical supply chain would not change the price charged to final consumers in the retail market, nor reduce the dead-weight loss from monopoly pricing. All that it would likely achieve would be to alter the division of monopoly profit between the two vertical levels. That is, more competition in M's upstream market would likely reduce the value of a, and more competition in distribution would tend to increase the value of a.[12] In this example it is true by construction that M's product is a relevant antitrust market, at least in the sense that a vertically integrated M and a downstream distributor (not necessarily a monopolist), would charge the monopoly price p^m and earn supranormal monopoly profits p^m. Indeed, a monopoly *at any level in the vertical chain* will always result in consumers being charged p^m and monopoly profits p^m being earned in this example.[13] However it is possible that an investigation into market power at the upstream or downstream level in the vertical chain would be misled into assigning *all* of the market power to one or another level depending upon whether a was close to 1 or close to 0, by following standard market definition techniques.

Such techniques are not easy to apply to situations where there is imperfect competition at more than one level in the vertical supply chain. Asking whether M could profitably raise wholesale prices above marginal cost is *asking a question about the solution to a two-person bargaining game*. If we endowed M with all of the bargaining power (i.e. the ability to make a take it or leave it offer) than the answer would be yes. If we endow D with all of the bargaining power the opposite conclusion is reached. Both conclusions are misleading. Whether

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12   Greater competition in retailing or distribution might result in some dissipation of the downstream monopoly rents if D could not commit himself to supplying no more than the monopoly quantity. See Hart and Tirole (1990) and Vickers (1996) for more on this. To avoid overcomplicating the example, we will assume that D has such commitment or contracting power.

13   At least given appropriate assumptions concerning contracting or 'commitment' possibilities. See the footnote immediately above.

or not M's product is defined as a relevant antitrust market should not, we suggest, depend upon how the profits on the sale of M's product to final customers are divided between M and D. This would mean that if M and D merged to form a vertically integrated company, our answer might be different if the pre-merger value of a had been close to zero say. We find it anomalous that market definition should depend on whether M supplies D through an exclusive contract, or whether M and D vertically integrate to form a single company.

The approach which recommends itself for market definition in vertically-related markets is therefore to ask whether *a hypothetical profit-maximizing vertically integrated monopolist manufacturer and retailer or distributor that was the only present or future producer or seller of the product(s) question would impose at least a small but significant and nontransitory increase in price (SSNIP), above the competitive price level, assuming that all potential substitute products are sold at competitive market prices'*

Implementing this test for the example above would lead to the conclusion that M's product is a relevant antitrust market, and that it was being supplied through a chain of monopolies with the 'wholesale' price determining the division of the monopoly profit between them. This should help to prevent a competition authority from attempting to resolve the competition problem by applying procompetitive measures to only one level of the vertical chain, while leaving the other as a monopoly.

This approach to market definition in vertically-related markets has further merits which we mention only briefly here. Suppose, for instance, that manufacturing was actually very competitive (i.e. there are many competing 'brands' which are viewed as close substitutes at competitive prices by consumers), but that there is still only a single monopoly retailer D, who sells only M's 'brand' at a monopoly price. If we ask whether a vertically integrated monopolist manufacturer and retailer of M's 'brand' would be able to profitably raise prices to final consumers significantly above competitive levels *given competitive prices for all potential substitute products,* the answer would be no, since any increase in price would result in large-scale consumer substitution to other brands. Observing that

M's 'brand' is sold for a monopoly price would then lead us to correctly locate the source of monopoly power, i.e. D's monopoly over distribution

It might be argued that if we had simply asked the market definition question in the usual way, i.e. whether M would be able to profitably increase the wholesale price of his 'brand' significantly above competitive levels, we would have reached the same conclusion, and this may be true. However from our discussion above it should be clear that if we did so we would not know if this was because there were many close substitutes for M's 'brand', or because the solution to the bilateral monopoly bargaining problem between M and D resulted in a low value of a. Distinguishing these two situations is crucial however if appropriate remedial measures are to be taken.

Another advantage to adopting this approach, as previously noted, is that it treats vertically integrated producers and distributors entirely symmetrically with vertically separated ones, and with markets supplied under exclusive vertical contracts. Our market definition does not depend upon the vertical structure of production and distribution. This is an important advantage which has immediate application.

A recent example comes from the much discussed 'football' cases in the UK. In these cases much of the discussion surrounding market definition concerned the point in the vertical supply chain at which markets should be defined.[14] These debates have been echoed in other sports rights cases in Europe.[15] In the Manchester United merger inquiry, and in the 'Premier League' case, BSkyB argued that the profits from showing live Premier League matches were increasingly being transferred upstream in the prices paid at auction for broadcasting rights. Since it was not making supranormal profits in broadcasting live Premier League matches to viewers, BSkyB argued, they could not be defined as a relevant antitrust market. On the other hand, Professor Martin Cave, in the Premier League

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14   See MMC (1999) and the Premier League Judgement, Restrictive Trade Practices Court, 1999. For an economic commentary see Harbord and Binmore (2000).

15   European Commission (1999).

case, argued that the relevant antitrust market was 'the market in the television rights to live Premier League matches.'

The relevant question was clearly whether *a vertically integrated Premier League and downstream broadcaster would be able to profitably raise prices to viewers significantly above competitive levels, given competitive prices for all potential substitute programs.*

Posing the question this way makes it clear that it is the profitability of broadcasting live Premier League matches to viewers which matters for market definition, and not how these profits are divided between broadcasters and the original rights owner. The evidence is that broadcasting Premier League matches is extremely profitable, so it seems likely that whoever owns the broadcasting rights has market power. Whether or not the rights to live Premier League matches are a relevant antitrust market depends on whether broadcasting Premier League matches would remain profitable if all substitute programs were available at competitive prices. That is a more difficult question, which we will not attempt to address here.

Conclusions

Market definition is typically thought of as a preliminary step in monopoly and mergers inquiries, the purpose of which to assist in identifying firms with the potential to exercise market power. As we have pointed out, the usual approach to market definition (i.e. the standard SSNIP test) actually attempts to answer this question directly, making it redundant, and reducing subsequent market share analysis to a meaningless tautology. It is also fraught with internal contradictions. To conclude that Firm W with 75% of the market for 'widgets' has 'market power' is to conclude that the market has not been correctly defined. According to the standard version of the SSNIP test the market should have been defined as 'Firm W widgets,' of which Firm W is a monopolist. To put this another way, under the standard version of the SSNIP test, *all firms with market power are monopolists.*

Our version of the SSNIP test resolves these prob-

lems. The root of the problem is that the standard approach conflates the concepts of 'monopoly power' and 'market power', and these are not the same thing. Our version of the test asks whether a hypothetical monopolist of 'widgets' would have *monopoly power*, i.e. be able to profitably raise prices above competitive levels given that all potential substitute products are sold at competitive prices. If the answer is yes, then 'widgets' are a relevant antitrust market, and it is perfectly consistent, although not necessarily empirically correct, to conclude that Firm W, with 75% of the market for 'widgets', has market power.

The fact that our two new versions of the SSNIP test are theoretically more difficult to implement, because they require information not readily available in market data, is not, we suggest, the major drawback that it may at first sight appear. In our experience no competition authority ever attempts to carry out the SSNIP test in any case, so the level of difficulty is to a large degree irrelevant. The value of the SSNIP test is that it poses a well-defined question which at least potentially assists in clarifying the issues at stake, and the types of evidence which are to be used.

The value of our two new versions of the SSNIP test is that they pose the right well-defined questions. This should help to avoid some of the confusion which has surrounded applications of the standard version.

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