1. Introduction

Provisions against the abuse of a dominant position are common to many -- but not all -- competition laws. An economic definition of a dominance is that a firm holds a "dominant position" if, in a relevant market, it can behave substantially independently of its competitors.\(^1\) Three distinct parts to the analysis are required for effective enforcement of such provisions. First, define the relevant market. Second, determine whether the firm under investigation has a dominant position. Finally, evaluate the specific activity of the firm to determine whether it is an abuse.

A dominant position does not exist in a vacuum. Simply being a large firm implies nothing about dominance. Instead, a dominant position is held in a particular relevant market. Given a relevant market, whether a firm is dominant is found by considering its exposure to competitive pressures. The market share of the firm is a useful first screen for learning whether it is dominant. However, market share is not the only factor to consider. Two other important factors are the size of barriers to entry into the relevant market and the likely competitive responses by rivals.

The discussion to this point has been essentially static. Dynamic change, however, is important to any evaluation of dominance. In markets undergoing rapid change, a firm with a large market share may not be dominant. Such a firm may not be dominant because the large share may be only temporary -- new rivals may soon enter -- or the market itself may be only temporary -- subsequent innovation may leave the product with no demand as consumers buy the next, improved version. Hence, it is important to consider not only the present environment in evaluating dominance but also to consider the future evolution of a market.\(^i\)

Once a firm has been found to be dominant in a relevant market, it can be difficult to evaluate the effect on competition of a specific activity. Abusive activities can affect competition at any of several levels of production or distribution. Some actions by dominant firms can be
pro-competitive or anti-competitive, depending on the circumstances. Some actions can harm some parties, yet be pro-competitive.

Section 2 discusses the identification of a relevant market. Section 3 addresses the identification of a dominant position. The final substantive section discusses which actions constitute an abuse of a dominant position.

This note does not present a discussion of the offence, "abuse of a dominant position," under any specific jurisdiction. In particular, this discussion differs substantially from EC practice in some important respects. Instead, this paper discusses the topic only from the point of view of economics.

2. Relevant Market

For a firm to abuse a dominant position, it must hold a dominant position in a relevant market. Hence, the first step in an evaluation of a firm's actions is to define the relevant market. The definition of relevant markets is discussed in the previous note. Recall that relevant markets are defined by considering the substitutability or interchangeability of products by buyers. Goods that are close substitutes are generally in the same relevant market, and products that are not close substitutes are generally in different relevant markets.

However, defining a relevant market that is dominated by a single firm is more complex than defining a relevant market that is competitive. In fact, if the definition of relevant market presented in the note on market definition were strictly applied, then it is logically impossible to find a monopolist of a relevant market, if the monopolist has already maximised profits. In the note on market definition, a relevant market is defined as the smallest set of products and geographic area meeting the criterion,

"A product or group of products and a geographic area in which it is sold such that a hypothetical, profit-maximising firm that was the only seller of those products in that area could raise prices by a small but significant and non-transitory amount above the prevailing levels."
Consider the case of an actual monopolist. An actual profit-maximising monopolist will have already raised prices of the products in the relevant market to the profit-maximising prices. Therefore, a hypothetical profit-maximising monopolist would not raise prices above those already prevailing in the market. Hence, the set of products sold by the actual monopolist logically cannot be found to be a relevant market under the above definition.

An escape from the logic trap is to compare the physical properties of products, differences in end uses, differences in consumers and historical patterns of sales. These data can be used to determine whether products are likely or not likely to be physically interchangeable. Interchangeable products would be assumed to be in the same relevant market. It is important, however, to not rely too heavily on physical similarities in defining relevant markets.

Another escape from the logic trap is to ask whether the "possibly dominant" firm would raise prices if one of its possible competitors were removed. If it would raise price, then the two firms are competitors and their products are in the same relevant market. If it would not raise price, then the two firms are not competitors and their products are in different relevant markets.

Another approach is to determine the relevant product markets in another, competitive, location and to assume that relevant product market definitions are universal.

3. **Identification of a Dominant Position**

A firm holds a dominant position if, in a relevant market, it can behave substantially independently of its competitors. That is, it holds a dominant position if it has "substantial market power." Market power is difficult to measure. Statutory monopolies, of course, have substantial market power. For other markets, however, finding whether a firm has a dominant position begins with learning the market shares of suppliers to the relevant market. If the firm has a sufficiently small market share, then it is presumed not to be dominant.

If the firm has a larger share of the market, then other factors -- such as the existence of barriers to entry or expansion by rivals, other firms' market
shares, the nature of the product -- are evaluated to determine whether the firm has, in fact, a dominant position. The size of entry barriers is important in that they indicate the level of competition which a firm faces from potential entrants. If entry barriers are low, so that firms would be faced with competition from new entrants if they anti-competitively raised prices, then even firms with large market shares do not have market power and cannot be dominant. On the other hand, if entry barriers are high, then the firm is protected from competition from any firm that is not already a competitor in the relevant market.

Similarly, if current competitors could quickly and substantially increase their sales if the firm under investigation behaved anti-competitively, then that firm cannot be dominant. If other firms have relatively small shares of the market, then there may be something that would hinder those firms from expanding to compete with the firm with large shares. Their products might be designed for special uses or they may have inadequate distribution channels, for example. In such cases, the other competitors may not be able quickly to expand their sales or production in competition with the possibly dominant firm. If they cannot, then the firm is likely to be dominant.

3.a. Measuring market shares

Market shares can be measured in a variety of ways, i.e. by unit sales, value of sales or production capacity. In practice, the measure chosen is often determined by the available data.

The decision about how to measure market shares is especially important in jurisdictions where dominance is defined by law according to specific market share criteria, i.e. where the competition law states that a firm with market share above a certain level is presumed to be dominant. In these jurisdictions, it is particularly important to correctly measure the shares of firms that are not currently active in a market and of firms that are not operating at full capacity. For example, if a firm currently has 50 per cent of all sales in a market, but there are rival firms with large quantities of unused capacity that they could quickly begin to use, then the firm would not be dominant in an economic sense. (That firm could not behave anti-competitively because its rivals could quickly react and take sales from it.) However, in many jurisdictions, if sales were used to measure market shares, then that firm would be found to be dominant under the competition law. If
instead, market shares were measured by capacities, then that firm may not be found to be dominant under the law. Hence, the legal environment in which competition officials work influences their choice of market share measures.

If products within a market are sufficiently homogeneous, then unit sales can be used to measure market shares. Market shares of heterogeneous products may be better measured by value of sales, under the theory that higher-priced units provide more "service" to the buyer and therefore should have more weight than lower-priced, presumably lower-quality units.iv

Shares of capacity can measure market shares, but can be misleading when there are significantly different qualities of capacity. For example, assume that one firm owns two plants. Only 50 per cent of the units produced by one plant can meet the more rigorous technical specifications that can be met by 100 per cent of the units produced by the other plant. In this case, the full capacity of the first plant cannot be considered a possible supplier to customers requiring products meeting rigorous specifications. Hence, in measuring the capacity of the firm to supply such customers, only half of the capacity of the first plant cannot be counted.

One measurement problem is presented if some firms are vertically integrated and others are not. That is, some firms may sell all their output on the market, other firms may sell some of their output but use the remainder internally, and others may always use all their output internally, as an input into another process. For the firms that sell some of their output on the market, then probably all their production (or capacity) that is not committed to internal use should be "counted" as in the market: they would likely not suffer a high opportunity cost (lost profits from downstream manufacturing) from selling some additional production to the market.

For the firms that do not sell to the market, it is more likely that their production or capacity should not be "counted" as in the market. Attention should be given to whether there are substantial investments needed for marketing or distributing the product (such as a requirement for highly trained technical servicepersons or for a chain of distribution outlets) and to whether sale of the product provides significantly lower (marginal) profits than internal use. If there are barriers to selling on the relevant market, or if the firm would suffer a decrease in profits if it were to divert units from internal use to sale on the market, then the capacity or production or value of internal transfers of the vertically integrated firms should not be counted in making
market share calculations. Otherwise, uncommitted capacity of vertically-integrated firms may be "counted" as in the market.

A different problem is presented by markets in which sales are not stable over time. This problem can arise when there are very few sales, such as for very unusual pieces of machinery, e.g. large steam turbines for electricity production. In this case, the variation in shares is a consequence of the indivisibility and infrequent sales of the product and statistical methods can be applied.

Another problem, perhaps especially important for economies in transition, is unstable sales due to noncyclical changes in the market. For example, if a new technology were recently introduced, and the firm with that technology has rapidly growing sales, should its current market share be counted or historical share or projected share? Alternatively, if buyers are operating at much reduced levels and only vertically-related suppliers make sales, then should current or historical market shares be measured? In these cases, current market shares may be uninformative and it may be useful to use "best estimates" of future sales shares because it is future competition, or dominance, that is of interest.

Having found a measure of market shares, the share of the possibly-dominant firm is evaluated to determine whether it is sufficiently large to indicate possible dominance.

3.b. Dominance-indicating market shares

Economic theory, in itself, cannot suggest "rules of thumb" relating share of a market to degree of dominance. Where each firm has a small share, then it seems unlikely that any firm has market dominance, even if there are high entry barriers into a market. On the other hand, if only one firm supplies a market and it is protected by high entry barriers, then it is clearly dominant. The problem is that there is no percentage of a market above which economic theory implies that a firm is always dominant.

In various jurisdictions, "rules of thumb" have been established that relate market shares to dominance. For example, the Commission of the European Communities has said that it takes the view that a dominant position can generally be taken to exist when a firm has a market share of
40-45 per cent, and cannot be ruled out in the range 20-40 per cent. In the United States, the legal provisions closest to those prohibiting abuse of a dominant position are those prohibiting "monopolisation" and "attempt to monopolise." One summary of the case law states,

"Courts consistently find market shares of 80-90 per cent and higher to be sufficient to conclude that the defendant is a monopolist. They also consistently find market shares of less than 50 per cent to be insufficient. A majority of courts are reluctant to find sufficient monopoly power when the market share is less than 70 per cent."

Simply knowing a firm's market share is just the beginning of an analysis of dominance. The possible reactions of competitors and possible entrants is not measured by such a share. However, market shares might usefully serve as a screen, so that firms with smaller shares are presumed not to be dominant but firms with larger shares are subject to further scrutiny.

3.c. **Barriers to entry**

The size of entry barriers to the market, i.e. the size of entry costs, is the second important factor in finding whether a firm is dominant. If there are no (or low) barriers to entry into a market, then even a firm with large market share has no market power. If other firms could enter a market quickly with little sunk cost, and at sufficiently large scale, then firms in the market cannot act anti-competitively. That is, they cannot be dominant. The reason for this is as follows. Assume that there are very low entry barriers into a market, and that an incumbent firm has a large share. Assume the firm raises its price. Firms that were not originally suppliers to that market would recognise the high profits that could be earned in the market. They would recognise that entry costs are low. Therefore, they would enter the market. They could offer lower prices and take away the customers of the incumbent firm. With this threat of competition from new entrants, the firm with large market share cannot persistently act anti-competitively. It cannot be dominant.

There is a policy debate over what types of costs should be considered in assessing entry costs. One side argues that costs that must be borne by entrants but that were not borne by incumbents are the only type of entry costs which should be considered. For example, if the incumbent's mine was
opened when receiving government permission cost $50,000, but now the cost of receiving government permission is $75,000, then, according to this view, only the increase in cost ($25,000) would "count" as a cost of entry. Another side argues that any cost that must be borne by entrants but is not currently borne by incumbents are entry costs which must be considered. In this example, $75,000 would constitute an entry barrier. Clearly, it is entry barriers of the second type that affect the probability that new entry will occur in response to anti-competitive action by the incumbents.

In practice, it can be difficult for competition officials to identify the barriers to entry of a market. Not being businessmen, they often do not appreciate all the elements of successful entry into a market. Examples of entry costs include:

-- government regulations, which can either explicitly limit entry or be very costly to comply with;
-- exclusive long-term agreements with suppliers of necessary inputs, so that new entrants cannot buy inputs;
-- cost disadvantage if there are economies of scale (lower unit costs as a higher quantity of units are produced) and new entrants cannot quickly achieve sales at the low cost quantity;
-- capital cost disadvantage if the incumbent has a cheaper source of capital than potential entrants;
-- expenditure to overcome "strategic barriers to entry;ix
-- expenditure to overcome "switching costs" of buyers, that is, costs which make it difficult for potential customers to switch from buying from the incumbent firm to buying from an entrant;
-- expenditures to overcome the fact that "reputation" for high quality products is important. (This would be true for products where customers cannot easily inspect or test the product for quality and customers bear very high costs if the product is of unexpectedly low quality.)

In the last two cases listed, consumers would be unlikely to buy from a new supplier.

It can be difficult to determine whether a particular cost of entry is "low" or "high." This judgement is made in comparison with expected profits if a firm enters the market. Unfortunately, such profits are not easily predictable by competition officials.
In order to assess entry barriers, one might wish to ask the following questions:

1. Are there potential suppliers or firms that could substitute production that could switch easily and quickly to the supply of the relevant market? (This is equivalent to the search for uncommitted entrants in the market definition note.)
   - Are there other industries or markets that use a similar production technology?
   - Are there producers that use similar distribution channels and distribution networks who could start production or acquire the relevant product?
   - Are there firms that produce the relevant product in other geographic markets, not separated by large transport costs?
   - Is there idle capacity in the industry?
   - Are there vertically-integrated firms who could easily increase production to serve the market?

2. What is the recent history of entry? (Lack of successful entry is not sufficient evidence of entry barriers: perhaps the market is very competitive so there are no excess profits to attract entry.)
   - Has entry occurred by investments in new capacity, acquisition of an existing supplier or by firms already producing similar products moving into a new (product or geographic) market? (If entry has been only by acquisition, then that says little about the existence of entry barriers. If entry has been by large scale investment in new capacity, then this suggests that barriers to entry are not high.)
   - How long does entry take?
   - Have conditions in the market changed substantially in recent years, i.e. deregulation, changes in tariff, laws, technology, demand conditions, prices of substitutes, new substitutes, etc.? (If so, then historical entry evidence may not be relevant.)

3. Assessment of absolute or cost advantages
-- Do incumbents have any particular cost advantages vis-à-vis new entrants, i.e. control over scarce resources, patents, copyrights, trade secrets, expertise/experience, contracts with input suppliers?
-- Are there any other cost advantages to incumbency?
-- Are there any legal or regulatory barriers to entry which apply to entrants but not to incumbents? Licensing, certification, etc.?

4. Assessment of strategic (first mover) advantages

-- How large are sunk costs, i.e. can equipment be leased, resold or transferred to other uses? Does equipment have a short useful life? Are there contract manufacturers? Are there contract distributors?
-- Are there large fixed costs, i.e. are there significant expenditures on research and development, product development, advertising, distribution, etc.? Does the manufacturing itself have large economies of scale, i.e. do costs per unit fall significantly when only a small quantity is produced?
-- How large are "switching costs" for buyers, i.e. how costly is it for a buyer to change from buying from one supplier to another, taking into account possible necessary changes in equipment or other inputs?
-- Is a reputation for quality necessary for significant sales? (If buyers can cheaply, before purchase, determine the true quality of the product or if the buyer does not suffer a large loss if the quality is bad is, then a reputation for quality is probably not necessary for significant sales.)
-- Is entry more difficult because of vertical foreclosure, i.e. do contracts or agreements between vertically-related firms increase the difficulty of entry? (For example, an exclusive dealing agreement could make entry more difficult for some firms under some circumstances. These are discussed in the note on vertical agreements.)

3.d. Other dominance-indicating factors

In addition to market share and entry barriers, the likely response of current competitors should be considered in evaluating the dominance of a firm. If current competitors can respond quickly, substantially and inexpensively to anti-competitive behaviour by a large firm, then it cannot
hold a dominant position. Current competitors are likely capable of such a response if they have large excess capacity, if capacity can quickly be expanded or if capacity to supply one market can quickly be re-directed to supply another market.

Another factor that might affect possible expansion by rivals is the nature of the product. Two of the entry barriers listed above, switching costs and reputation being important, can serve to limit expansion by current competitors as well as barriers to the entry of new competitors. For example, 1 cm pipe and 1.5 cm pipe may be substitutes for some use when the pipe is initially installed. However, once installed, replacement of one section of pipe can only be by pipe of the same size as the remainder of the system. Switching from one size to the other would incur large costs, as the entire installation would have to be replaced. If one company can make only pipe of size 1 cm, then it cannot rapidly expand its sales to take advantage of anti-competitive behaviour by a rival making pipe of size 1.5 cm. Similarly, if reputation for quality is important, then consumers are less likely to switch suppliers in response to anti-competitive behaviour. Therefore, rivals could not expand sales in response to such behaviour.

Other factors have been cited as indicating market dominance. These include: strong vertical integration or a well-developed distribution system, superior technology, strong brand name, extensive range of products, mature market, technological and financial resources and conduct.\textsuperscript{x}\textsuperscript{i} Except for "conduct," each of these factors is a factor that might increase barriers to entry, which has been discussed above. For example, if a well-developed distribution system is necessary for success in a market, then the time and cost of developing one must be considered in evaluating whether new entry might occur in response to anti-competitive behaviour in the market. But "a well-developed distribution system" cannot otherwise enter into an evaluation of a dominant position. The same argument applies to the other factors. "Conduct" is rarely an indicator of dominance. However, if certain conduct is rational only if a firm is dominant, then such conduct is an indicator of dominance.

Market dominance of a firm is established by considering its exposure to competitive pressures. Such pressure can come from current competitors and from potential competitors. If, upon investigation, it is found that neither current nor potential competitors can substantially react to abusive behaviour
by the firm, then such a firm has a dominant position in that market. The next section discusses the ways in which such market power could be abused.
4. Abuse of a Dominant Position

Holding a dominant position is not, in itself, anti-competitive. However, interfering with the competitive process, such as preventing or discouraging entry into a market by new entrants, is an abuse of dominance. For example, it would be an abuse if a dominant firm refused to supply an input to a potential competitor with the intention of preventing its entry into a market. In contrast, charging prices above the competitive level is not an abuse of a dominant position under this definition. (Under EC law, charging excessively high prices is an abuse of a dominant position.) In other words, an abuse of a dominant position is using a firm's current market power to interfere with the process of competition, such as interfering with new entry or expansion of capacity or output by rival firms.\textsuperscript{xii}

Firms' actions can have different effects in different environments. An action might be pro-competitive under some circumstances but be anti-competitive under others. An action might have no effect on competition if performed by a non-dominant firm but be anti-competitive if performed by a dominant firm. There are no simple "rules of thumb," applicable under all circumstances, that state that a particular action is always anti-competitive or never anti-competitive. Nevertheless, some common approaches are explained below.\textsuperscript{xiii}

4.a. Excessive pricing or restriction of output

4.a.i. Excessive pricing as an abuse of a dominant position

Charging excessive prices, or prices significantly above competitive levels, can be the result of exploiting market power. Under EC law, charging excessively high prices can be an abuse of a dominant position. In the definition adopted here, however, charging excessive prices is not an abuse of a dominant position: it does not, in itself, interfere in the competitive process.

The reason "excessive pricing" is not, by the definition presented here, an abuse of a dominant position is that it would be difficult to enforce and would, generally, be counterproductive. Enforcement of a prohibition against "excessive pricing" by dominant firms in economies in transition would restrict the growth of a market economy -- by interfering with the process by which prices signal firms about what and how much to produce, by
discouraging risk-taking, by discouraging new firms from entering a market due to fear of legal troubles -- and require excessive resources from the competition authorities. There are several parts to this argument.

First, high prices and high profits provide signals to firms and incentives for increasing production. Current competitors have incentives to expand production and other firms have incentives to enter, if possible, the market and begin production. Controlling prices would interfere with the information flow and incentives of a free market economy.

Second, it is difficult to determine whether a price is, in fact, "excessive." It is difficult to identify and measure the costs that can be allocated to the particular product. It is difficult to determine a "fair" profit when firms must be rewarded for risk-bearing, innovation and so on. It is difficult to determine appropriate changes in "fair" prices as demand and supply conditions change. It is difficult to determine whether the price prevailing in a freely competitive market elsewhere would be the "fair" price to impose in another market. Applying the limited resources of a competition agency to such investigations may change the agency into a price control agency which neglects its role in fostering competition.

Third, it would be difficult to devise appropriate legal tests or remedies for "excessive" pricing. Dominant firms would need low-cost means of determining, before they choose a price, whether it is "excessive." Courts would also need a low-cost means of determining whether a price is "excessive." Once a court has determined that a price is excessive, it would need a low-cost, appropriate remedy. In particular, a court cannot become a price regulator.

4.a.ii. Responses to excessive pricing

Excessive pricing can be a persistent problem in some markets in economies in transition. The best response by governments to excessive pricing depends upon the facts of the specific case. Some markets are natural monopolies, that is, markets in which a single firm can supply the market at lower cost than any combination of two or more firms. For these markets, the best response is likely direct regulation by a specialised regulatory agency.
In other markets, excessive pricing should be ended by the entry of new competitors and the expansion of rivals. In these markets, the negative effects of a delay in the adjustment to a market economy probably outweigh any political or social benefit to temporary price regulation. In these markets, the long-term solution is not a pricing decision by a court but instead the growth of competitors. A possible response to the problem of slow and inadequate entry would be fostering better conditions for entry, such as effective banking, financial and business information systems. The competition office might also focus on prevention of exclusionary practices by firms and by other parts of the administration.

There remains a difficult problem for economies in transition resulting from the pattern of past capital investments, when decisions about plant size and ownership were not market-based. Some of these deliberately created monopolies might not, especially given all the obvious problems of economies in transition, be soon eroded by the market forces described in the preceding paragraph. Here, one could imagine the firm still having substantial market power five or ten years hence. For these "unnatural monopolies," if the price is clearly persistently excessive, then temporary price regulation by a price regulating agency might be appropriate.

The time period over which excessive pricing is expected to persist is estimated by considering entry barriers into the relevant market. If entry barriers can be overcome in the reasonably foreseeable future, then the excessive pricing is unlikely to persist.

4.b. Predatory pricing or expansion of output

Predatory pricing is "the use of short-run price-cutting in an effort to exclude rivals on a basis other than efficiency in order to gain or protect market power." In predatory pricing, the predating firm suffers immediate losses in order to gain, subsequently, sufficient market power to make profits that outweigh the early losses. Hence, for predatory pricing to be profitable, the firm must be dominant in the sense developed here. I.e., the firm must currently have a large market share -- since if it did not, it is unlikely to grow large enough quickly enough to be soon capable of exercising market power to raise price -- the firm must be protected by entry (and re-entry) barriers, and the rival firms must be likely soon to exit the market.
Even when these conditions exist, a firm may charge very low prices for competitive, not anti-competitive, reasons. Competitive reasons why products may be sold at low prices include: obsolescence, the risk of spoilage, shifts in consumer tastes and the need to offer low, introductory pricing of a new product. Because there can be both pro- and anti-competitive reasons for "excessively" low prices, predatory pricing is evaluated on a case-by-case basis in the context of the particular market.\textsuperscript{xvi} There is little agreement about workable rules to differentiate predation from intense competition in the case of a firm with large share in a market with entry and re-entry barriers.

4.c. \textit{Raising rivals' costs}

A dominant firm may seek to maintain its dominant position by raising the costs of its rivals. If the firm raises the costs of entry, then it reduces the number of competitors. If the firm raises the costs faced by its current competitors, then it reduces the severity of competition to which it must react. One way in which a firm can increase entry barriers is through the use of government regulation. (Another way is through signing long-term contracts with customers.) Such regulation might explicitly limit entry of new firms or it might simply raise the costs of entry so that no firm chooses to enter. Alternatively, a firm may use government regulation to increase the cost of its rivals' business. For example, regulations to ensure health and safety might be deliberately written so that one firm can more cheaply comply than the other firms. While such use of regulation to raise rivals' costs is unusual in established economies and legal systems, they may be more common during periods of transition.

4.d. \textit{Vertical restraints}

Vertical restraints are agreements between enterprises at two levels of production or sales. For example, an agreement between a brewery and pubs that the pubs will not sell beer made by any other brewery is an example of a vertical agreement. When one party to a vertical agreement has a dominant position, then it can use that agreement to abuse its position.

There are two primary ways in which vertical restraints can be used to abuse a dominant position, market foreclosure and reduction in competition in
a market. Market foreclosure means that entry into a market is made more difficult or more costly.

Market foreclosure can occur because of exclusive dealing agreements, exclusive territories agreements or tying agreements. For example, exclusive dealing agreements imply that the supplier's competitors are denied access to certain downstream enterprises. If such tying-up of downstream firms is practised on a wide scale and with contracts of long duration, then it may be difficult for new suppliers to get their products on the market. If the upstream party to the exclusive dealing agreement is dominant, then there may be too few downstream enterprises that have not signed an agreement with him. Entrants into the upstream market might have to set up their own downstream firms, obliging them to enter two markets at once. Because of the additional cost, potential entrants may be unable to enter and upstream rivals may be unable to expand.

Exclusive territories agreements can foreclose markets if all upstream enterprises have signed long-term agreements covering all territories. In this case, no entrant could enter the downstream market without also entering the upstream market because none of the incumbent upstream firms would sell to it. If there is a dominant firm in the upstream market, none of its rivals are large, and there are economies of scale in the downstream process, then a firm that is dominant in the upstream market may foreclose the downstream market through exclusive territories agreements.

If the market for one product is competitive, the market for another product has a dominant firm, and the dominant firm ties the products, then this can foreclose the competitive market. For example, if there is a dominant firm in the shoe market and the firm ties the sale of shoe care products to the sale of shoes, then enterprises that make only shoe care products may not be able to survive because their potential customers will have bought shoe care products from the shoe manufacturer. A firm that wishes to sell shoe care products may have to sell shoes as well.

Vertical agreements may reduce competition in a market, but only if at least one side of the agreement is a dominant firm and there are barriers to entry into the other market. For example, assume that a dominant firm signs exclusive territories agreements. Then, within those territories, the only competitors faced by the downstream signatories are firms that buy from competitors of the upstream signatory. If the upstream competitors are very
small and have limited ability to expand, then downstream competition is diminished.

Note, however, that each of the vertical restraints discussed here can also act to help new entrants enter a market and can reduce costs of enterprises. Thus, these types of agreements are not, in themselves, anti-competitive. Very often, indeed usually in OECD Member countries, these agreements have pro-competitive effects. This subsection, however, explained how their use by a dominant enterprise can have anti-competitive effects.

4.e. Price discrimination

Price discrimination is charging customers different prices for the same goods, for reasons unrelated to costs. Dominant firms may engage in price discrimination if they face competition in local markets. They may charge lower prices in the more competitive markets and higher prices in the less competitive markets. Hence, price discrimination can be an indication of vigorous competition. On the other hand, price discrimination can have anti-competitive effects. For example, it can increase the production costs of new entrants, if the supplier of an input discriminates in favour of the incumbent firms.

5. Conclusion

Market dominance is determined by considering the whole competitive environment of a firm. If it does not face substantial competitive pressures, so that it can behave substantially independently of its competitors, then it is dominant. One screen for dominance is market share: if the firm has a small market share, then it cannot be dominant. A second screen for dominance is barriers to entry: if the barriers to entry are small, then the firm cannot be dominant. If a firm has a large market share and is protected by significant barriers to entry, then one would wish to evaluate the possible expansion by competitors in response to anti-competitive behaviour, the ease with which customers can change suppliers, and other factors. Simply being dominant is not anti-competitive. Rather, the effects of the alleged abuse must be evaluated.
The discussion in this note is based on an economic definition of dominance, not the definition of dominance under any country's law.

Under EC law, there is also a concept of "joint dominance," meaning that a group of firms, when considered together, holds a dominant position. This concept is not discussed here.

One should also consider the long-term effects of public policy directed toward preventing firms from enjoying a period of market dominance as their reward for innovating or risk-taking. Persistently dominant firms may behave anti-competitively to retain their position, and ought to be prevented from doing so. However, firms that are "dominant" for only a limited period of time may be competing not primarily through prices or quantities, but through innovation. In this sort of competition, at any given moment a firm may seem to be dominant. But, over a period of years, other firms may seem to be dominant as they make successful innovations and take the market from less successful rivals. Computer markets have this type of competition. The apparent profit made on each unit sold is very high. However, these profits are rewards for developing new, better computers. Over time, the dominant manufacturers in each computer market changes and some markets fade away. The firms are rewarded for undertaking the costs and risks of innovation by the high prices and high profits during their periods of dominance. If public policy prevents these profitable periods, then firms would invest less in research and development. Hence, what appears to be, in the short run, a policy in the public interest may, over the long run, not be.

Especially in economies undergoing price liberalisation and other rapid changes, dominance should not be inferred simply from the ability to raise prices. Rather, longer-term indicia of market power, especially the existence of barriers to new entry or to expansion by existing competitors, should be used to evaluate dominance.

In fact, if market shares measured in units are substantially different from market shares measured in value, this could indicate that markets have been mis-defined. For example, firms' products may appear to be similar, but some firms may sell substantially more expensive and specialised versions to buyers who find the lower quality version to be unacceptable. In such a case, there are at least two product markets, the high-quality, specialised product and the low-quality product either alone or in the same market with the high-quality product.


These two related offences are similar to "abuse of a dominant position" in the sense that activities that may be condemned if a firm is a "monopolist" or "attempting to monopolise" in the United States are the same activities as those that may be condemned if a firm is "dominant" in the European Communities, e.g. predatory pricing, price discrimination, vertical integration, and tying.
Nevertheless, one jurisdiction's "dominant position" is not exactly another's "monopoly."


viii A "sunk cost" is a cost of entry that cannot be recovered upon exit. For example, assume that a new ice cream shop must spend $50,000 for advertising and $300,000 for specialised freezers. Assume that the freezers could be sold, in the used freezer market, for $200,000. If the ice cream shop decides to close, the advertising expenditure cannot be recovered. However, the freezers could be sold. Therefore, the sunk cost of entry for the ice cream store, in this example, is $150,000, of which $50,000 is the advertising expenditure and $100,000 is the loss on the freezers.

Where capital markets do not work perfectly, the distinction between sunk and non-sunk entry costs becomes less important. As a practical matter, where capital markets work poorly then the relevant costs are likely to be any cost of entry, not just sunk costs. In the example above, if the shop owner could not borrow to buy the freezers, but must already have the capital to buy them, then that fact in itself increases the barriers to entry.

ix A "strategic barrier to entry" is an entry barrier that results from actions of a rival firm. For example, if a rival has invested in large excess capacity in order to convince future potential entrants that they should not enter, then this investment would be called a "strategic barrier to entry."

x The step-by-step process and many, but not all, of these questions are from Barriers to entry and exit in UK competition policy, Office of Fair Trading Research Paper 2, London Economics (1994), pp. 26-35.


xii In both the European Communities and the United States, holding a dominant position is not itself illegal. In the European Communities, an impairment of competition constitutes abuse. This can include charging excessive prices, where the burden to prove "excessiveness" is on the plaintiff. [Whish, p. 512.] In the United States, the unilateral exercise of market power is not an offence, but wilful acquisition or maintenance of market power can be an offence.

xiii Abuse through vertical restraints, the subject of another note, are not here discussed in detail.

A firm operating in several different markets might, under certain conditions, predate in one market despite having, in that particular market, a less-than-dominant market share.

One necessary -- but not sufficient -- condition for predation that has been used in the United States is the "Areeda and Turner rule," according to which a price is deemed to be possibly predatory if it is below "marginal cost." Marginal cost is the additional cost incurred in the production of an additional unit. Marginal cost is commonly considered to be relevant for findings of predation because of its role in very simple economic models of competition. In these models, the only reason a firm prices below marginal cost is to predate. More realistic economic models of competition indicate that the simple approach of the Areeda and Turner rule is misleading because there are many competitive reasons for firms to price below marginal cost.

Under an exclusive territories agreement, an upstream enterprise agrees not to sell to any other downstream enterprises within the same territory. "Territory" may have geographic meaning, or may refer to type of downstream consumer. For example, McDonalds Corporation may promise that no other McDonalds restaurant will open within the same city or within some specified distance of existing McDonalds restaurants. An exclusive dealing agreement is exclusive in the opposite direction, so that the downstream firm promises not to deal with any other upstream firms. An example of such an agreement is an auto retailer promising to sell the automobiles of only a single manufacturer. Often, exclusive dealing agreements are paired with exclusive territory agreements. Tying is requiring a buyer to buy one product in order to have the right to buy another. Refusal to deal is the practice of refusing to supply a product to a buyer. Such a practice may be used to enforce the other vertical restraints.