Exclusive Contracts

Theory and Practice

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Abstract

Exclusive contracts between two parties may be of concern for competition policy as they can be used to restrict the extent of competition in markets. In this note we briefly review the economic literature on the various effects of exclusive contracts and also illustrate with a real-world example how the relevant theory can be applied in practice to assess such contracts from a competition perspective.

1 Introduction

1. An exclusive contract is a contract between a buyer and a seller that requires the buyer to purchase a certain product only from that particular seller. Exclusive contracts are widely observed in practice as they can often assist the signing parties to realise significant additional benefits. For example, a manufacturer of consumer goods would find it worthwhile to invest in a retail shop only if that retail shop committed not to sell the products of competing manufacturers. If this were not the case, some parts of the manufacturer's return on the investment would accrue to his rivals and consequently affect the decision to invest in the first instance.

2. An exclusive contract between the manufacturer and the retailer would support the investment and would be jointly beneficial to the signing parties; however, it may have negative implications for third parties (e.g. other sellers or manufacturers) as it may damage their economic interests. A third party manufacturer may find it difficult to enter a market, where an incumbent monopolist has signed exclusive contracts with a large proportion of existing customers as these customers would be much harder to attract than they would otherwise be without having signed an exclusive contract. The exclusive contract between the incumbent and his customers hurts the potential entrant.

3. In some cases, the negative side effects of an exclusive contract are greater than the joint benefit of the two parties signing it. If this is the case, the exclusive contract is socially sub-optimal as its anti-competitive effects, i.e. the losses imposed on third parties, dominate its efficiency effects, i.e. the joint benefits offered to the buyer and the seller.

4. It is the competition authorities' task to block or terminate exclusive contracts for which anti-competitive effects dominate efficiency effects. However, these effects are often difficult to identify correctly, and failure to do so may lead to inappropriate competition policy decisions, e.g. the banning of an exclusive contract that is actually efficient overall.

5. Economic analysis can complement legal analysis in modelling markets where exclusive contracts have been signed and are likely to offer important insights in a number of competition cases.

6. In this note, we briefly review the main findings of the economic literature on exclusive contracts and illustrate the applicability of the economic approach using a real-world example.

7. The document is structured as follows. First, we review the relevant microeconomic literature, discussing the main anti-competitive and efficiency effects of exclusive contracts. Secondly, we present a brief guide for addressing exclusive contracts in practice. Thirdly, we refer to two recent legal cases where economic analysis provided decisive insights. Finally, we show using a practical example how the economic approach can be used to analyse the overall competitive impacts of a particular exclusive contract.

2 The economics of exclusive contracts

8. The main objective of economic research on exclusive contracts has been to identify conditions under which these contracts are anticompetitive. In general, the focus has been on exclusive contracts offered by a monopolist supplier as exclusive contracts offered in a competitive market are less likely to affect competition.

9. Historically, the standard argument adopted was that exclusive contracts were anti-competitive as they prevented customers to switch to other suppliers when observing lower prices. However, this argument was rebutted through the suggestion that a rational customer would not sign an exclusive contract unless the terms of the contract compensated him or her for the foregone opportunities of buying at lower prices from other suppliers during the duration of the contract.[1] In other words, customers would only sign exclusive contracts if they were at least as well off as by not signing it.

10. This argument does not take into account the impact of exclusive contracts on other agents in the marketplace, who would be able to supply goods at a lower price but lack the opportunity. More generally, an exclusive contract between a buyer and a monopolist supplier is anti-competitive if it prevents the buyer from switching easily to a seller that could offer the same product at a lower cost. In this case there is a loss of efficiency, as at least part of the market is not served by the most efficient supplier (i.e. the supplier with the lowest production cost).

Anti-competitive effects of exclusive contracts

11. Recent economic literature evaluates exclusive contracts from an aggregate perspective, taking into account the interests of third parties too.

12. In general, the economic models are set up as follows. First, the market under investigation is served by a monopolist, called the incumbent. Secondly, there is an alternative supplier, the entrant, planning to enter the market in the near future. Thirdly, customers are assumed not to be hurt by an exclusive contract offered by the incumbent as they would not sign it otherwise. Finally, exclusive contracts are anti-competitive if they prevent a more efficient entrant to enter the market and serve consumers at a lower cost.

13. Exclusive contracts can be anti-competitive in cases where

(i) production technology gives rise to scale economies, i.e. the average production cost decreases as the scale of production increases, or
(ii) buyers need to pay a penalty for a contract breach.

[1] This is a standard Chicago School argument. See Bork (1978) and the following literature for further details.

Industries with scale economies

14. In an industry with economies of scale, i.e. where the average production cost decreases as the volume of production increases, a firm can generate a cost advantage both from a superior production technology and from a larger scale of production.

15. The incumbent can keep a rival with superior technology out of the market if he signs exclusive contracts with a large enough number of buyers and prevents the entrant from realising the cost benefits of large scale production.

16. Customers are enticed to sign these exclusive contracts through a price discount. These discount prices are subsidised by higher prices paid by those buyers who were not offered exclusive contracts but who do not have the chance of buying from the potential entrant either as the rival has been kept out of the market[2]. Exclusive contracts are anti-competitive in this case as they can be used to keep out a rival from the market even if he has a cost advantage over the incumbent for any scale of production[3].

Exclusive contracts with penalties

17. A second case when exclusive contracts can be anti-competitive is when they include a penalty to be paid by the buyer if she switches to the entrant before the expiry of the exclusive contract. This implies that the entrant needs to compensate the buyer for the penalty to be paid to the incumbent for switching supplier. Clearly, this compensation increases the entrant's cost and, as a result, it may have an impact on the entry decision. The effect of this extra payment on the entrant's entry decision depends on the incumbent's prior information about the entrant's production cost.

18. When the incumbent knows the entrant's cost in advance, and the entrant has a lower production cost than the incumbent, the incumbent will accommodate entry. The reason for this is that she will be able to fine-tune the level of the penalty and use it to extract the entire producer surplus from the entrant. In spite of this transfer of surplus from the low cost entrant to the high cost incumbent through the buyer's penalty for switching, no inefficiencies are incurred on aggregate as the market is served by the supplier with the lower cost.

19. When the incumbent does not know in advance the entrant's production costs, she will set a penalty that will prevent entry if the entrant has only a modest cost advantage over the incumbent. If this is the case, the market will be

[2] This result relies on the implicit assumption that buyers cannot coordinate their purchasing decisions. If they could, the incumbent monopolist could not implement her exclusionary strategy as buyers would coordinate their actions and not sign exclusive contracts with the seller one by one.

[3] It must be noted that exclusive contracts are anti-competitive in this case only under some assumptions made on buyers' demand function. See Rasmusen, Ramsey and Wiley (1991), "Naked Exclusion", *American Economic Review*, 81 (5)., pp. 1137-1145, and Segal and Whinston (2000), "Naked Exclusion: Comment", *American Economic Review*, 90, pp. 296-309, for further details.

served by the less efficient (higher cost) seller, resulting in an inefficient outcome on aggregate[4,5].

20. Besides the anti-competitive effects presented above, exclusive contracts also have positive efficiency effects, meaning that they allow the signing parties to realise some additional benefits.

Efficiency effects of exclusive contracts

21. Exclusive contracts can also increase economic efficiency. This is the case when

(i) they help realise the rewards to a relation-specific investment, or
(ii) there are significant fixed costs attached to entry, or when
(iii) branding is important in the business relationship between the buyer and the seller.

Forbearance as a reward to investment

22. In many cases, a significant benefit resulting from a relationship between a buyer and seller can only be realised if the seller undertakes an investment that is of little value outside that particular relationship. This type of investment is called a relation-specific investment.

23. In the absence of exclusive contracts there is a danger that the buyer will switch to another supplier, and as a result the investing supplier will not be able to realise an appropriate economic return from his investment. Therefore, without an exclusive contract, the potential investor will not take on the relationship-specific investment even if that would be efficient on the aggregate. Exclusive contracts provide an efficient solution in this case.

Excessive entry

24. Whenever a firm decides to enter the market, it generally incurs a significant fixed cost. Therefore, excessive entry can result in an inefficient duplication (or multiplication) of fixed costs. In the absence of exclusive contracts, the entrant can "steal" some of the incumbent's business, preventing it from recovering her entry costs. It might be the case that less entry would be more beneficial on the

[4] This argument is based on Aghion and Bolton, "Contracts as a Barrier to Entry", *American Economic Review*, 1987, 77(2), pp. 388-401. For further analysis of this scenario, see Spier and Whinston, "On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance, and Renegotiation", *Rand Journal of Economics*, 1995, 26(1), pp. 180-202.

[5] The economic literature identifies further special cases when exclusive contracts can be anti-competitive. For example, assume that two suppliers compete sequentially for two buyers. In this case the first buyer may choose to sign an exclusive contract with one of the suppliers in order to decrease the other supplier's bargaining power with respect to the second buyer, and share the additional profit with the first supplier. For more details, see Bernheim and Whinston, "Exclusive Dealing", *Journal of Political Economy*, 1998, 106(1), pp. 64-103.

aggregate, and if excessive entry can be curbed by exclusive contracts, these contracts could increase economic efficiency.

Branding

25. Exclusive contracts are often signed by a retailer requiring her to sell the products of a certain manufacturer only. Manufacturers often provide their retailers with services and investment for promotions that may have (positive) effects on other competing brands sold by the same retailer. With no exclusive contracts, competing brands may free-ride on the manufacturers' services and investment, making it harder for him to accrue an appropriate return on their investment. An exclusive contract would protect this type of investment and would therefore be efficiency enhancing[6].

26. Overall, it can be said that exclusive contracts can offer significant benefits to the signing parties, and indirectly, to the entire market, under a wide range of circumstances[7]. However, it is not possible to use a strict rule *per se* in assessing the anti-competitiveness of exclusive contracts as in each case there needs be an examination of the possible efficiency and anti-competitive effects of these contracts.

27. In the next section we offer a guideline about how to use economic analysis in an inquiry on the anti-competitiveness of a specific exclusive contract.

[6] Exclusive contracts in a branding context can also be beneficial in other ways. In particular, they can be used as a safeguard for the manufacturer (or the buyer) to be associated with inferior partners in both the downstream and the upstream market.

[7] For a systematic discussion of pro-competitive effects, see Rey, P. and Tirole, J. (2003), "A Primer on Foreclosure", forthcoming in the *Handbook of Industrial Organisation*, vol. III. and Motta, M. (2004), *Competition Policy: Theory and Practice*, Cambridge University Press.

3 Case law on exclusive contracts

Contracts preventing efficient scale: Ice-cream (1995)[8]

28. In 1991, the Mars group filled a complaint with the European Commission claiming that the exclusive contracts between retailers and the two leading ice-cream supplier firms, Langnese-Iglo (LI) and Scholler, hindered its sales of ice-cream in the German market.

29. There were two types of exclusivity clauses in the contract between ice-cream manufacturers and retailers. First, outlet exclusivity refers to the requirement that the retailer is not allowed to sell other manufacturer's product, and secondly, freezer exclusivity only requires that the freezer made available by the manufacturer to the retailer cannot be used to store ice-cream produced by the rival manufacturer.

30. Due to the important sunk costs necessary to establish a distribution system, there were strong economies of scale in the market.

31. With a large number of small retailers, and significant fixed costs, the European Commission considered that the use of exclusive contracts prevented prospective entrants to realise the economies of scale that would have allowed them to effectively compete in the market. The European Commission decided the exclusive contracts between LI and Scholler and the retailers were anti-competitive and prohibited their use.

Contracts excluding rivals: Microsoft (1998-2002)[9]

32. Microsoft was alleged to have violated the US antitrust laws by engaging in a variety of practices aimed at excluding existing and potential rivals from the market. In particular, Microsoft signed exclusive contracts with computer manufacturers, internet service providers, online services, internet content providers and software vendors, requiring them to exclusively promote Microsoft's Internet Explorer web browser.

33. The US Courts found Microsoft guilty, among others, for attempted monopolisation of the browser market through exclusive dealings and the tying of its browser to its Windows operating system, though Microsoft filed a successful appeal against the initial decision.

34. The Microsoft case attracted huge attention not only from the media but from academic economists as well[10]. They pointed out that Microsoft thought that

[8] See Case T-7/95 Langnese-Iglo v. Commission [1995] II-ECR 1533, 391-8 and Case T-9/95 Scholler v. Commission [1995] I-ECR 1611, 391-8.

[9] See U.S. v. Microsoft, 198-2, Trade Cases 72, 261 [1998], 9n28, 466n74, 511-23, and U.S. v. Microsoft, Findings of Facts, U.S. District Court for the District of Columbia, Civil Action No. 98-1232 (TPJ).

Navigator imposed a serious threat to Windows because developers might have started writing programs using the application programming interfaces that Netscape included (and planned to include) in Navigator rather than those in Windows. This, together with economies of scale and network externalities, implied that it was in Microsoft's interest to weaken Navigator as much as it could and exclusive contracts were potentially an efficient tool for that objective.

[10] See, for example, Whinston, M. "Exclusivity and Tying in US vs. Microsoft: What We Know, and Don't Know", *Journal of Economic Perspectives*, 2001, 15(2), pp. 63-80.

4 Exclusive contracts: A real-world example

35. In this section we use a real-world example to illustrate how to assess the anti-competitive effects of exclusive contracts in practice. This example is based on a recent piece of research work in the mobile phone market that London Economics was involved in. For confidentiality reasons, all data from the case have been changed.

36. We look at a service market in which customers make repeated purchases of the service. The size of the market is 10 million units of service per year. Initially, the market had been served by an incumbent monopolist. The market was opened up to competition and a new regulatory regime was put into place. However, the evolution of the market indicated that other firms capable of providing the same service still did not find entry in the market a very attractive option.

37. Specifically, there was only one firm that decided to enter the market. The entrant firm managed to sell 200,000 and 400,000 units respectively in his first two years of operation in the market. In our market investigation we only examined these two years of operation. Detailed data on production costs were not available for the two service providers. However, one could infer the costs of producing one unit of service at their actual operating scales by dividing total costs (of each producer) by the number of service units sold (by each producer). These cost estimates are presented in Table 1.

Table 1: Estimated unit costs for the incumbent and the entrant

Operation Scale → **Company ↓**	**200,000**	**400,000**	**10,000,000**
Incumbent			4
Entrant	18	12	

38. Data in Table 1 suggest that there are substantial economies of scale in the market, i.e. the average cost of providing services decreases with the scale of production. However, it cannot be determined from this table alone which service provider is the more efficient, i.e. has the lower average cost for each given scale of production.

39. Competition among the two service providers evolved as follows. Once the incumbent found out that the entrant would enter the market, he offered long term exclusive contracts (3, 5 and 7 years) with substantial discounts to customers. The original list price for one unit of service and the discount prices for different contract lengths are shown in Table 2.

Table 2: The incumbent's service prices	
List price	15
Discount price for 3-year contract	6
Discount price for 5-year contract	5.5
Discount price for 7-year contract	5

40. The main feature of these exclusive contracts is that, whenever a customer wants to buy services from the entrant, the incumbent has the right to terminate the contract and the customer was obliged to pay him a penalty. The penalty was equal to the total nominal discount for each service unit purchased at discount price under the contract.[11] For example, for a 3-year service contract, the penalty was equal to 15 – 6 = 9 for each service unit purchased.

41. By the time of the entry of his rival, the incumbent offered around 60% of his services under exclusive contracts. The main question was whether the exclusive contracts offered by the incumbent and signed by a significant proportion of customers restricted competition in the service market or, in other words, whether they had anti-competitive effects or not.

Analysis

42. The starting point for the competitive analysis relates to the fact that the penalty to be paid to the incumbent upon buying from the entrant increases customers' switching costs. The question therefore is whether an entrant, that could potentially offer its services at a lower cost than the incumbent, would be negatively affected by these increased switching costs.

43. As these stipulated penalties are linked to the service units already purchased under the contract, the costs of terminating these exclusive contracts increases with the number of service units purchased. If we assume, for simplicity, that the customers' purchases of services are uniformly distributed over time, i.e. they purchase the same number of service units during every unit of time, the cost of terminating an exclusive contract increases with the time spent in it.

44. Hence, whenever the entrant wants to acquire one of the incumbent's clients under an exclusive contract, he needs to effectively compensate her for the penalty to be paid to the incumbent upon switching. In practice, this compensation would take the form of lower prices, and customers will only switch to the entrant if the savings from lower prices would compensate them fully for the penalty paid to the incumbent for exiting the contract.

[11] This can be taken as a backward punishment. Alternatively, the service provider could link the penalties to the service units that would have been purchased during the remaining duration of the contract. This latter type of punishment can be taken as a forward punishment.

45. It is now possible to examine whether the incumbent's exclusive contracts (as described) are substantially restricting competition by limiting the rate at which the entrant could acquire targeted customers. We do this by calculating the maximum unit price that the entrant could charge a customer under an exclusive contract with the incumbent and show that this price does not always cover the entrant's costs.

46. In particular, it is possible to analyse the decision of a customer who signed an exclusive contract of length T (T = 3, 5, 7 years) with the incumbent t periods ago, where t can denote months, years or any other unit of time. Assume also that the customer buys n service units in each period, regardless of its price.

47. At any period t, the customer has two options: remaining with the incumbent or switching to the entrant. If she decides to stay with the incumbent, she continues to pay the discounted price p_I specified in the contract for all the service units to be purchased during the remainder of the contract, i.e. for the remaining $T - t$ periods. In this case, the customer's total future expenses are equal to $E_I = p_I \times n \times (T-t)$.

48. If, on the contrary, the customer decides to switch to the entrant offering the service for the unit price of p_E, her total future expenses (E_E) can be composed as the sum of the value of future purchases from the entrant and the penalty paid to the incumbent. The costs of future service units purchased from the entrant can be written as $p_E \times n \times (T-t)$, while the penalty paid to the incumbent for terminating the exclusive contract is equal to $\theta_I \times n \times t$, where θ_I denotes the penalty for each service unit purchased under the exclusive contract. As a result, E_E can be written as $E_E = p_E \times n \times (T-t) + \theta_I \times n \times t$.

49. The price offered by the entrant has to be such that the customer is at least slightly better off by switching to the entrant. Formally, this means that p_E has to be such that $E_E \leq E_I$. This implies that p_E needs to satisfy the following inequality

$$p_E \leq p_I - \theta_I \times \frac{t}{T-t} \qquad (1)$$

50. It can be seen that the entrant's price p_E depends on the price set by the incumbent and a term comprising the penalty imposed by the incumbent and the ratio of the time elapsed and time until the expiry of the contract. This shows the extent to which the incumbent effectively had had a first-mover advantage over the entrant.

51. Table 3 below presents the price schedule for various terms (number of months) that the customer has spent under the exclusive contract. Hence, if the entrant wanted to acquire a client that signed a 5-year exclusive contract with the entrant 1 year (12 months) earlier, he needs to offer the same services for a unit price of 3.13[12].

[12] This is computed using (1) above and letting $p_I = 5.5$; $\theta_I = 9.5$; T = 60 months (or 5 years); and t = 12 months.

Table 3: The entrant's maximum prices					
Contract length (years)	**Discounted price (p_I)**	**Incumbent's Penalty (θ_I)**	**Entry prices (p_E) after number t of months**		
			3	**12**	**24**
3	6	9	5.18	1.50	-12.00
5	5.5	9.5	5.00	**3.13**	-0.83
7	5	10	4.63	3.33	1.00

52. Two very important insights can be derived from Table 3. First, the longer the time period that elapsed since signing the exclusive contract, the larger the total penalty to be paid to the incumbent and the lower the price p_E that the entrant can charge for his services from a client under an exclusive contract with the incumbent. In other words, it is easier to acquire a customer who is in the early stages of its exclusive contract.

53. Second, if the entrant wants to acquire a customer that signed an exclusive contract with the incumbent at least one year (12 months) ago, he needs to offer its services at a price that is lower than the costs listed in Table 1.

54. Overall, the entrant has little chance to acquire a customer that signed an exclusive contract with the incumbent more than one year (12 months) ago even if he produces on a large enough scale to have low unit costs, let alone when, being a newcomer, he operates on a smaller scale than the incumbent.

55. As the incumbent started to offer its exclusive contracts well before the entrant actually entered the market, the entrant has almost no chance to allure customers under exclusive contract with the incumbent. In fact, he has basically no access to 60% of the market.

56. The last question to answer is whether it is possible for the incumbent to foreclose the market through pricing (which in itself may not be anti-competitive) given that the entrant is already restricted to only 40% of the market.

57. To address this question, reconsider our cost data in Table 1. In particular, we complete the empty cells of the table with hypothetical cost data that are consistent with the estimated data and also add some more hypothetical data for additional production scales. The new hypothetical "database" might appear as follows.

Table 4: Hypothetical cost data					
Operation Scale → Company ↓	**200,000**	**400,000**	**4,000,000**	**6,000,000**	**10,000,000**
Incumbent	20	14	8	6	4
Entrant	18	12	7	5	3.5

58. The information presented in Table 4 indicates that the entrant is the more efficient firm as it has lower costs for each scale of production and therefore, the society would be better off if it would be served by the entrant. However, since the entrant only has access to 40% of the market due to the existence of exclusive contract with the incumbent, it can be seen from Table 4 that this degree of market access might allow him to reduce unit cost to 7. At the same time, if the incumbent only serves the customers under exclusive contract, he can reduce his unit cost to 6.

59. This implies that the incumbent can choose a price of 6.5, making it unprofitable for the entrant to stay in the market. In addition, pricing at 6.5 does not raise any anti-competitive concerns either as it is slightly above cost.

60. In this case it is not the incumbent's pricing technique that forces the entrant out of the market but the exclusive contracts that prevent the entrant to achieve a large enough scale, e.g. 50%, where he could compete with the incumbent on equal terms. It can be seen from this example that exclusive contracts can be used to foreclose the market, and as a result, they have anti-competitive effects. As no efficiency effects of these contracts were identified, they were deemed to be anti-competitive and there was thus a rationale for prohibiting them.

61. By linking this real world example to the relevant economic literature, it can be seen that the exclusive contract in this example is potentially anti-competitive as it prevents the entrant from realising economies of scale that would allow him to compete with the incumbent on an equal footing. The customers necessary to achieve a critical mass for this mechanism to work were linked to the incumbent through exclusive contracts containing a penalty term rather than just the loss of low prices.

5 Concluding remarks

62. In this document we reviewed the economics of exclusive contracts, with special focus on identifying conditions under which they can distort competition in the market. Our conclusion is that economic analysis can offer valuable support for the application of competition law in such cases.

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