

***Diamonds:
The Competitive
Cartel***

by
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Foreword

FMF *Occasional Papers* are designed to make available to a wider audience essays on particular matters of moment or currency.

About the interest and relevance of the diamond industry for the South African economy there can be no question. Though Cape Town is fondly referred to as the “Mother City”, it was in Kimberley, the diamond city, that the South African economy as we know it today originated. It was there that Cecil J. Rhodes founded De Beers Consolidated Mines, which by 1891 produced 90% of the world’s output of diamonds. De Beers’ diamond sales, in turn, provided much of the capital for the development of the gold mines on the Reef as well as of other industries.

The illicit diamond buying (IDB) laws (presently contained in the *Diamonds Act*, No 56 of 1986) are widely regarded as existing solely for the benefit of De Beers. However, the government as tax-gatherer has a great interest in keeping diamonds in reputable, responsible and therefore more easily taxable hands. Only then can it be reasonably confident that income tax will be paid on the profits earned on all diamonds leaving the country. It is therefore doubtful whether the government would be anxious to repeal the IDB laws and dissolve the police diamond squad. It is also doubtful whether repeal would add to De Beers’ own security costs since the company for years has not relied on the police but has provided its own security at enormous expense. Establishing the value to the various parties of keeping the IDB laws on the statute book is consequently not a simple matter.

As this *Paper* elaborates, the South African government played a supportive role in the maintenance of the original Diamond Corporation (established in 1930 by Sir Ernest Oppenheimer) which evolved into the Central Selling Organisation in the mid-1930s. Both government and the industry benefited. But, as Professor Reekie indicates, that role ended shortly after World War II. In today’s climate government (and rightly so) is suspicious of anti-competitive laws and activities that are harmful to the consumer. Thus the CSO’s continued existence since *circa* 1950 cannot be explained by government support.

The author provides a sound and unique explanation for the tenacious continuance of the CSO despite the powerful forces that have at times threatened it. He urges that the South African *Competition Act* (No 89 of 1998) be revised so as to take into consideration the unusual economic factors involved in the sale of diamonds. He argues that these unique circumstances make the existing selling arrangements highly beneficial to everyone involved, including producers, cutters and polishers, retailers, consumers and the governments of diamond-producing countries.

The views expressed in this *Paper* are those of the author and are not necessarily shared by the members or staff of the Foundation.

We are, however, grateful to the editor of the *South African Journal of Economic and Management Sciences* for his permission to reprint and so more widely circulate this important *Paper*.

Eustace Davie
Director, FMF

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W Duncan Reekie

Chapter 1

Introduction

This *Paper* assesses the relationship of the Central Selling Organisation (CSO) with diamond producers on the one hand, and cutters and polishers on the other. The CSO is the marketing arm of De Beers, which itself operates as a diamond miner and recoverer. In addition to examining the international diamond market the paper looks at some implications of the new 1998 Competition Act for the South African diamond industry. The CSO is found to be a cooperative marketing agreement, but not one with collusive monopoly gain as its objective (it is shown that alternative structures could better achieve this). One of the CSO's goals is raising, maintaining or stabilising price while expanding output. Monopoly, to the contrary, has as a defining objective quantity reduction. This intuitively illogical pairing of apparently mutually exclusive objectives is due to the presence of the "Veblen" effect in demand for diamonds. Price collapse would both damage the diamond market worldwide, diamond holders and consumers everywhere, as well as the South African industry and those dependent on it. Another goal is transaction cost reduction. In short, the horizontal and vertical agreements underlying the production and marketing of diamonds by-and-large fall within the "trade-off" conditions of the Act.

Chapter 2 examines basic cartel theory and the reasons why cartels tend to collapse. Chapter 3 indicates that while the CSO meets these conditions, nevertheless it has persisted. Chapter 4, looking at the monitoring and enforcement mechanics of the cartel, shows that these provide further reasons why the cartel will be weak. Chapter 5 indicates that while government support is the traditional way of overcoming the problems discussed in Chapters 3 and 4, such support for the CSO was only present in the first half of the 20th century, not the second. Chapter 6 looks for two alternative reasons for the CSO's persistence. If these reasons are valid and consumers and the economy at large benefit from the CSO, Chapter 7 shows that implementation of some parts of the Competition Act of 1998 could negate these benefits.

Chapter 2

Why anti-competitive cartels do not persist

When a group of sellers acts in collusion, tacitly or explicitly, as if it were a single economic entity this is often termed collusive or cartel behaviour. Decisions are taken with group welfare in mind, rather than being prompted by a rivalrous desire to get one step ahead of competitors. Price changes may then be initiated only when there is good reason to expect that all sellers will benefit from a similar change, whether it is upwards or downwards.

The belief is that *pro rata* shares of profits resulting from collective wealth maximising behaviour will be greater than if individualistic, but self-defeating motives dominated. The social costs of noncontestable monopoly (for example lower volumes and higher consumer prices than would otherwise exist) would therefore be incurred.

Cartels are either tacit or explicit agreements which, because of rivalry, seldom last. Cartelisation is understandable but it will not persist (see Stigler, 1966, p230). There are several strands to the argument:

- 1) Individual firms belonging to the cartel will always have an incentive to chisel or cheat on any explicit or implicit price agreement. Such cheating will eventually be noticed and be followed by competing price reductions (leading to lower, non-collusive prices and tending to normal returns).
- 2) To guard against chiselling firms set up monitoring mechanisms (of each other) or allocate shares of market revenues or territories for exclusive use. This is costly to initiate and/or agreement and enforcement may be difficult. The less likely is agreement (e.g. efficient firms do not like feather-bedding inefficient ones, each likes a “fair” share of profits, which of course is difficult to define) the more likely is cartel breakdown.
- 3) Cartel breakdown through chiselling is also more likely the higher is the ratio of fixed to total costs in an industry. Given a relatively high burden of fixed costs, a “voluntary” short-term reduction of the flow of cash revenues (by “agreeing” to high uniform prices and to forego chiselling) may create financial difficulties. This is particularly true in times of demand depression – or its supply side corollary – capital outlay growth. Also, with a given cost structure, volatility of market demand can motivate cheating in times of famine and cartelisation in times of feast.
- 4) If existing firms do not cheat and pull prices down to lower levels, then, as in any contestable monopoly, new firms will enter the industry and achieve the same result. Indeed even the threat of their entry can have this result. (Again, as in monopoly, the situation must be contestable, and entry easy to activate.)

Chapter 3

The CSO does persist

The CSO, however, has persisted over several decades. Is it, therefore, a cartel? Newspapers frequently post headlines such as “The Cartel lives to Face Another Threat” (e.g. *The Economist*, January, 1987). The fact that the CSO has travelled such a long road, however, begs the question.

Take Stigler’s four conditions for cartel breakdown. They have long existed. First, sales (including those of stolen stones) outside of approved channels in the days of South Africa’s near monopoly of production resulted in the Illicit Diamond Buying (IDB) laws. More recently, Russian and Angolan diamonds have frequently been “leaked” onto the market (“cheating”). Second the CSO is the means of monitoring and apportioning sales of uncut stones. It is not (in absolute terms) an inexpensive arrangement and De Beers (which currently produces only one half of world diamond production by value) frequently has protracted and costly negotiations with other producers to ensure both their continued membership of the CSO and their adherence to its procedures – including that of purchasing all of their output of rough. That output, however, is dependent on a quota system based on supplying a certain proportion of De Beers’ sales. Thus when markets are weak, the absolute value of each quota falls. Third, much – but not all – diamond recovery is capital intensive (particularly underground or submarine) while both the supply of and demand for diamonds are volatile. Yet the centripetal forces making for marketing through the CSO apparently continue to be consistently greater than the centrifugal ones. Finally, the flow of new entrants into diamond production over the history of the CSO has not been trivial. Congo, Angola, Australia and Canada have or are about to join the list of major diamond-producing countries – often with no immediate De Beers involvement. Indeed, Australia’s Argyle mine initially seemed determined (see *The Economist*, 1987) to sell outside the cartel. Nevertheless, despite the presence of all four of Stigler’s conditions for breakdown being present the CSO persists.

One can therefore speculate that if the CSO is indeed a cartel it must have some very different features from the cartel norm as experienced in other collusive arrangements.

Chapter 4

The unique collusive weaknesses of the CSO

For a given cartel to be effective (and so persist) it must be arranged or organised in such a way that the conditions for breakdown are minimised. Or to put it another way, is the CSO superior (for the purposes of anti-competitive collusion) to more normal types of cartel arrangement? Successful collusion requires the following:

- 1) A good price monitoring system to facilitate the detection of “cheating” by sellers (i.e. diamond producers). This requires monitoring the up-take of buyers (i.e. sight-holders, or cutters and polishers). It is buyer purchasing behaviour after all, which indicates whether they have been the beneficiaries of secret price shading by sellers.
- 2) An effective enforcement mechanism for market sharing or output quota allocation. This in turn requires a “punishment” mechanism, for example the ability to increase supply (as a “swing” producer or stockholder) temporarily to reduce price for the given product below a level the “cheater” would find attractive.
- 3) Removal of the incentive to “cheat” at times of excess supply, while maintaining the collusive incentive at times of excess demand.
- 4) The erection and maintenance of effective entry barriers against newcomers.

Only point (3) is ambiguous. Certainly as a first approximation, a cartel which is successful at “smoothing-out” the flow of diamonds onto the market will increase or decrease “cheating” and “collusion” incentives by equal amounts over time. The CSO is apparently successful at such “smoothing” but this implies little about its net effectiveness in maintaining itself over time.

Cartel breaches are non-obvious

However, on point (1) the CSO’s “box price” system at prearranged “sights” obscures rather than highlights post-cheating buyer behaviour. Boxes are blends or assortments of diamonds. A cartel which did not use such a system of assorting diamonds could *more easily* detect cheating. (For example, boxes could be replaced by sales of single diamonds, or by sales of lots of diamonds of a similar quality or source.) Price transparency would be increased and “cheating” by cartel members – i.e. buyers and sellers dealing outside of the cartel framework – would be easier to measure and detect. Recall that it is buyer behaviour which signals cheating by a seller. A buyer who is indeed the beneficiary of price shading will have benefited (if buying, say, from a mine) by having purchased stones with the particular, specific characteristics of output from that mine. Other things equal it will want to purchase substantially fewer such stones from the CSO. In a non-assorted market that drop in demand would be readily noticed. A box of such stones would simply be rejected. With the sight and box system, however, it is much less easy for this drop in *specific* demand to be monitored. Buyers might not want the stones, but as they will make up only a fraction of the assorted box they will tend (even if reluctantly) to be accepted. (Certainly in the weeks leading up to a “sight”, information can be gathered by the CSO about preferred buyer behaviour, but that is not the same as observing outright rejection of a given type of stone.)

Disciplining is “unnecessarily” costly

Is the CSO an efficient enforcement mechanism – point (2)? Cartel enforcement normally takes the form of the “swing” producer flooding the market with the product which has been the subject of cheating (punishing the seller), or withholding from the market the relevant product so holding up prices and protecting market participants who have stayed loyal. Which route is taken depends on which party the swing producer believes it will be easier to get back in line after enforcement, and, of course, on the swing producer’s ability to adopt one or other approach. (Increasing supply

requires access to stones, withholding supply requires either production which can be stockpiled, or a willingness to buy-up large quantities of the product being leaked on to the market.)

The CSO no doubt applies these tactics (see *The Economist*, January, 1987). But does it do so with optimal enforcement efficiency? Again the sight system of heterogeneous boxes dilutes the impact of swing producer behaviour. Buyers would still obtain “boxes” even if a particular type or source of stone was being withheld (and De Beers sells over 3000 types – *The Economist*, 1987). Further, since the CSO explicitly sells heterogeneous boxes to sight holders, “flooding” the market with one particular source of stone has a much more diffuse impact on the “box” price than it would have had, had the “sights” been sales of stones by explicit source.

Indeed, since the “box price” system blends not only diamonds of heterogeneous sources, quality and caratage, the prices of individual stones are obscured. Sellers receive today’s CSO price per stone less 10 per cent for CSO overheads plus a margin. Come the date of sight, due to the lead time, sellers will then find it much more difficult to assess if they are getting a “fair deal” in the allocation system. If the cartel was organised on more conventional lines (e.g. by allocating ultimate revenues received by the CSO by caratage or some other indicator) transparency would be increased. Since the CSO’s ultimate selling price will differ from the buying price it paid to the mine – quite apart from any obscurantism due to the “box” system – there is little to suggest that perceptions of “fairness” are increased and that this is therefore an efficient monitoring mechanism. This lack of clarity as to whether an apparent price is a punishment or reward dulls the impact of the enforcement mechanism and may even prompt further attempts to get around the monitoring system.

Entry is not uncommon

Finally, on point (4), there are few if any entry barriers to new competitors, as the development of mines in Canada and Australia by large mining companies other than De Beers indicates.

In short the CSO, although it persists, does not seem to have any special advantages as a collusive mechanism. Indeed the reverse would seem to be the case. A mechanism is present, but is sub-optimal for both monitoring and enforcement of anti-competitive collusion. In short, the “sight” and “box” system explains *how* the cartel works, it does not explain *why* it works.

Other explanations must therefore be sought for the persistence of the CSO. Such reasons must either more than offset its weak collusive abilities, or the design of the agreement, and the agreement itself can be presumed to exist for reasons other than cartel-oriented profit maximisation.

Chapter 5

The need for an alternative hypothesis for CSO persistence

[I]f an economist finds something – a business practice of one sort or other – that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of ununderstandable practices tends to be rather large, and the reliance on a monopoly explanation frequent ... [I]f we ever achieved a system ... clearly seen to be competitive, we would have no explanation at all for the way in which the activities performed in the economic system are divided between firms.

Ronald Coase [p67]

Recovery of a mineral, on the one hand, and advertising to consumers, market research and distribution to processing intermediaries on the other, are distinct activities usually undertaken by distinct firms. Because a separation of mining and later distribution in its various forms is so common, economists often regard it as the competitive norm. De Beers, however, is a mining firm which also carries out these other activities through the CSO. Moreover, it restricts other firms' opportunities to sell rough diamonds and also restricts the opportunities of cutters and polishers to purchase them. Such restrictions are business practices that are not well understood; yet, conventional wisdom to the contrary, the practices appear not to arise from normal cartel-style behaviour. In this and the next section we look at three alternative hypotheses: government backing, transaction cost minimisation, and consumer price optimisation.

The role of government in cartels – Hypothesis A

Cartels are groups of producers which agree to act together to avoid the rigours of competition. But usually collusion neither works nor persists because at least some of the parties have an incentive to chisel on the deal. If this does not occur, newcomers will be tempted into the market.

But cartels can indeed survive if there is a body standing above the producers, most obviously a government, which can enforce agreement. The Organisation for Petroleum Exporting Countries, unlike a government dealing with firms inside a sovereign state, was powerless without such a body. By this token the CSO and the international diamond market differs significantly from the oil industry. This hypothesis can indeed be advanced to account for the persistence of the cartel. And it appears to have considerable support. Newbury 1989 (p360) argued: the “ghost at this long historical banquet of diamond riches in South Africa is the State” (meaning the Union government or its provincial predecessors). Moreover, in his penultimate chapter (p357) he draws on many previously unavailable documents (both corporate and governmental to emphasise how the strategic demands of World War 2 enabled the Imperial Government to create an “identity of interests” between itself and the CSO which “was at least as great as the longer and stormier relationship between the corporation and South Africa”.

Newbury's research presented a detailed gloss on these two assertions. He cited government documents from as early as 1876 which regarded the (government-imposed) limitation on claim holdings as an impediment to the formation of large companies and, therefore to increased revenues for the fiscus. Large companies could be taxed more highly since “the diggers could not be pressed for more” – not, be it noted, because of inability to pay but because “the political risk was too great” (p42). What happened from then on was that government adjusted its stance towards corporations and became the outside policeman which helped maintain the diamond cartel.

Government ensured stability in a number of ways. When a new entrant like Premier ignored the now successfully established single channel of distribution, government encouraged compliance by proposing a conference on output agreements in 1914. By 1919 government was chairing the meetings to determine output quotas. It ensured that the South West African producers would not

suffer confiscation for wartime reparations, being sold voluntarily instead to what was to become Consolidated Diamond Mines – a De Beers associate. Government also went to extreme and largely successful lengths to stop IDB on the alluvial fields (this was partly to stop the damage to price due to sales of stolen gems – but partly to ensure that approved channels for legally acquired gems were not by-passed).

The Great Depression of the Thirties saw the Premier Mine closed. The Oppenheimer-led syndicate tried to manage the market and Newbury's pages are replete with phrases such as "depended (on) ... the approval of the Union government for this strategy" (p306) and it "was welcomed by the Department of Finance and the Inland Revenue". However, the very early Thirties were still unprofitable for the industry and "Smuts intervened personally at the (British) Colonial Office ... inviting the Secretary of State to assume powers to limit sales from ... notably the Gold Coast (now Ghana) and Sierra Leone" (p317).

The late Thirties saw demand increase for industrial diamonds as the vehicle, metal and defence industries began to expand. This demand was continuous: industrial diamonds are not forever – they wear out and have to be replaced. World War 2 accentuated this trend and, as in World War 1, diamonds became a strategic mineral with London unchallenged by occupied Antwerp or Amsterdam as a conduit for Allied requirements. The pivotal role of London (whose influence was wider than Pretoria's) strengthened the CSO and its power was demonstrated by the Imperial government's refusal to permit direct exports to the US.

But, and here is the flaw with the hypothesis, this argument may have been valid from 1900-1945, but has it been so in the last fifty years? If not then there must be further alternative explanations for the CSO's persistence. The British Empire has evaporated. So the Imperial Government is no longer a cartel policeman. The Pretoria Government certainly maintains IDB laws in place in South Africa. But since the 1930s South Africa's share of world diamond production (by caratage) has slumped from close on 100 per cent to between 10 and 20. So local IDB laws, even if intended for cartel maintenance, can have little affect on international prices. Yet the CSO survives and indeed prospers. Moreover, it does so despite continued new entry, despite temporarily threatened free-riding by a Diamond Buying Office in Liberia in the mid-1980s, and another in Moscow in the late 1990s, and despite theoretical predictions to the contrary.

Newbury's book does not answer why the cartel has survived since 1950. Both theory and history say the reason must be government. But what government? And since it is now clearly not a government-policed arrangement, are there now, in the decades from 1950-2000, other and more plausible hypotheses for the CSO's persistence?

Chapter 6

Two alternative but complementary hypotheses: Efficiency and demand

Any business agreement (or contract) is a device for making a profit. The contract can be anything from a spot deal, through longer-term agreements, through to incorporation of an integrated firm. The issue is whether the De Beers: CSO agreement exists to maintain profits “as if” it were a monopoly (the conventional cartel rationale implying higher prices due to withheld quantities) or whether it exists to maximise profits subject to competitive market forces.

The traditional cartel rationale seems weak. First, cartels are unstable and relatively short-lived. This is not so here. Second, they will select optimally efficient monitoring and enforcement mechanisms. This does not apply here either. Third, a superior body to the cartel is required for longevity. This has not been so since mid-century when a globally influential government disappeared, and when South Africa’s role as an overwhelmingly dominant producer also ceased.

Yet the cartel retains its existing membership and continues to recruit new members. Clearly this must be because members believe individually that profits will be greater inside than they would be if they operated outside the cartel. But the motives and rationale may well differ from those provided by traditional cartel theory. If the CSO is a competitive response to the efficiency requirements of the market, on the one hand, and to consumer wants on the other then two further hypotheses are suggested:

- 1) The transactions costs of operating in the diamond industry are less (and so profits greater) inside the cartel than outside.
- 2) The nature of the product is so unique that cartel breakdown, in and of itself, poses a major threat to the continued existence of the industry and so to the profits and welfare of each and every cartel member, and these benefits filter through to, and are appreciated and highly valued by the final consumer. This uniqueness in turn means that cartel membership itself provides or underwrites a major part of the final product’s value.

In such circumstances can the mechanics of the cartel be better understood? Does the sub-optimal monitoring and enforcement mechanism provide significant benefits to cartel members in and of itself? Do other activities of the cartel lead to increased output (and consumption) of diamonds at higher prices (in a manner totally alien to normal cartel or monopoly theory which presumes lower output and higher prices)?

If the answer to these questions is in the affirmative then a reinterpretation of the CSO cartel in terms of anti-trust or competition policy is perhaps overdue.

Minimising transaction costs – Hypothesis B

The presence of transactions costs as obstacles to value-maximising trades benefiting all parties was first identified by Ronald Coase in 1937. In 1972 Coase’s insights were still only accepted by a few (*supra*). In 1991 Coase received the Nobel Prize for his work on the subject (basically for two seminal papers, in 1937 and in 1960). By the 1980s the whole new discipline of Law and Economics had burgeoned on the foundations laid by Coase and is now commonplace even in textbooks.

In essence business persons have always been expected to maximise profits by finding out how they can most accurately assess what the consumer wants, and providing goods or services at a price and cost which yield a profit. In the absence of monopoly behaviour, the larger the profit the better they have succeeded in tailoring their product to customer demand, and the more efficiently they have produced their output in terms of achieving lower costs.

After Coase (and his successors), economists and lawyers have understood that many joint value maximising trades beneficial to both buyers and sellers fail to occur because of the presence

of transactions costs. Businesspersons thus have an additional task – namely identifying and minimising transactions costs to permit trades to take place.

Important transaction costs include the presence of information asymmetry before the deal is concluded. A well-known example is the low price which can be obtained for second-hand cars. Buyers are fearful that a seller will try to sell them what she/he knows is a “lemon” but whose qualities the buyer cannot know. Purchasers refrain from entering the market and the price falls. As a consequence “good” second-hand cars are withheld from the market and far fewer trades take place than otherwise would. Sometimes also known as adverse selection, such pre-contractual opportunism also exists elsewhere. For instance where poor health risks may conceal non-identifiable but relevant information from insurers, who, aware of this, offer in turn a premium based on the population average. Those in the population with a better risk profile opt out since they are now getting a bad deal. The average premium must rise, and again the market may either collapse at the extreme, or many joint value maximising trades do not take place as the good risks who would happily have paid a fair premium have dropped out of the market.

Overcoming such problems is not cheap. The methods chosen to minimise the problems may as Coase indicated, be wrongly interpreted as monopolistic practices. In our own text on *Managerial Economics* (1995, p67) Crook and I draw on Kenney and Klein’s (1983) paper and use it for teaching purposes. The “sight” and “box” system in transactions cost minimisation terms is explained as follows:

The CSO economises on pre-contractual opportunism, information search costs, measurement costs and bargaining costs as follows. It restricts buyers to selected and approved dealers who have indicated interests in purchasing stones of particular sizes and qualities. They are offered a packet, or ‘sight’ of such stones roughly corresponding to their wants on a strict take-it-or-leave-it basis at a price based on gross characteristics. Neither the contents nor the price of the package is negotiable and refusal to purchase results in exclusion from participation in future ‘sights’ and hence effective exclusion from the trade. [This] ... [explains] *how* the cartel minimises transaction costs.

[*Why* does that, in its turn, explain the cartel’s existence?] Bargaining and value assessment stone by stone would be time consuming and costly (the gems have not yet been cut hence value to either buyer or seller would be relatively difficult to determine). Buyers need not inspect too carefully in looking for “lemons” since the packages have not been rejected by other buyers as deficient in quality. While the seller, by refusing to bargain (on penalty of withdrawal of future sight rights) saves on bargaining today being used opportunistically to make possibly dishonest claims that higher prices would be offered in future. (This forces buyers in their turn, to forego and hence save on their bargaining costs.)

The cartel is, therefore, an organisation which raises profits by reducing transaction costs. The ways in which it does so are not optimal (i.e. they are less than efficient) from the view of a monopolistically motivated cartel. That is, monopolisation and collusion to hold prices at high and stable levels, while restricting quantity, could be achieved, as already explained, in a different and less costly manner than the “box” and “sight” system as it exists.

Nevertheless, as the quote above indicated, the transaction cost explanation deals with *how* the cartel operates, it explains *how* the cartel aims to improve total profits (at least from the cost side), and thereby it explains *why* it becomes attractive to join. But it only explains *why* the cartel sticks together from the *supply* side. To complete the picture we must look at the revenue side of profits.

Optimising revenues and price – Hypothesis C

Diamond demand and supply are both volatile, the latter depending on new discoveries, and the former on fashion’s ebb and flow, disposable income, the economic cycle, and interest and exchange rates. Diamonds are seen as intrinsically precious and desirable, not as an investment

implying later resale, but as a visible embodiment of an illusion, love, sex and romance which will presumably last forever.

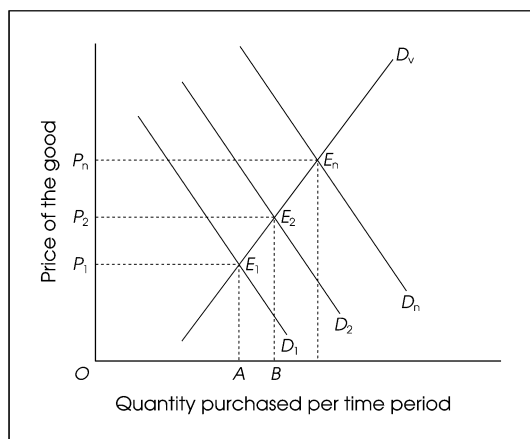
Some of these attributes would seem to place diamonds outside of the realm of economic analysis. To the contrary. Leibenstein explained the theory (on the demand side) in 1950. Leibenstein was puzzled that normal demand theory failed to account for the realities which exist in certain markets. His article was theoretical and did not mention examples such as diamonds, but is highly relevant here. The usual assumption is that market demand is a relationship between price and quantity. That relationship – in normal theory – is obtained by adding together the individual demands of all consumers (*which are assumed to be independent of each other and dependent only on the inherent attributes of the good itself*).

But, Leibenstein argued, what if there is also a “Veblen effect” (named after Veblen’s theory of conspicuous consumption)? Here Leibenstein distinguished between the good’s functional utility and the utility attached to its price; the latter is the conspicuous consumption element. It is this conspicuous component of price which matters; the higher the conspicuous price the more other people are impressed, and so the greater the satisfaction of the purchaser. *Individual demands, contrary to standard theory, are indeed affected by the demands of others, and in particular by the prices others are paying.*

Certainly each consumer has a normal demand schedule – refer to Figure 1. On the basis of given expected conspicuousness of price, say P_1 , P_2 or P_n , these could be aggregated to produce market demand curves D_1 , D_2 or D_n , depending on the conspicuous price. Only one point on these aggregated market demand curves is relevant, as shown in the figure. If consumers expect the conspicuous price to be P_1 , the demand curve will be D_1 , but if it turns out to be P_2 , they will move up to operate on demand curve D_2 , and so on. If conspicuous consumption is an important determinant of demand for the good, the higher the conspicuous price the higher the demand at all price levels. A line can then be drawn through the expected conspicuous price level of each of these demand curves and this produces the ‘true’ demand curve D_v . The remarkable feature of this demand curve is that it is upward-sloping. This suggests that an upward-sloping demand curve is conceivable, at least for certain ranges of prices on certain luxury goods.

If diamonds lost their intrinsic preciousness and desirability because of a low conspicuous price demand would collapse. The law of demand, that quantity is inversely related to price, may seem violated but actually is not. Algebraically the law states that $Q = f(1/P)$. With diamonds the equation must be amended slightly to $Q = f(1/P, P^c)$ indicating that quantity is still inversely related to price (as in D_1 , D_2 or D_n) but is also positively related to price as a conspicuous indicator of apparent intrinsic preciousness (P^c) as in D_v .

Figure 1



Unlike normal monopolistically motivated cartels, therefore, where profit maximisation requires raising price (and so withholding quantity) in order to maximise collective profits (thereby damaging consumer welfare), with a Veblen effect good such as diamonds the reverse is true. Explicitly raising and maintaining price raises demand *ceteris paribus*, enhances profits (or the business activity which permits the new price would vanish) and, in addition, improves and maintains consumer welfare. (The *improved* consumer welfare can be measured, for competition policy purposes in the conventional manner by comparing the consumer's surplus triangles above $P_1 E_1$ and above $P_n E_n$.) The *maintained* consumer welfare is measured by the fact that all existing owners of diamonds would have their ownership satisfaction destroyed if prices collapsed.

All participants in the diamond industry, therefore, from mines through to consumers, have extremely low time discount rates. Each has an interest in price levels which will maximise his/her own profits and/or satisfaction over a very long run. No operator in the industry with the possible exception of small-scale individual diamond diggers, has a short time horizon. The CSO cartel, with its mechanism of controlled buying and controlled selling of uncut stones in the light of changes in supply or demand, acts in the interests of all. This is why it stabilises final prices. But, unusually for a cartel, the "all" includes current and also previous final purchasers.

The sight system further enhances profits by reducing transaction costs. There is no governmental body standing above producers to keep them in line. The sight system, as a monitoring and enforcement mechanism for a monopolistically motivated cartel, could well be improved upon (but at the expense of increasing transaction costs). But it appears not to be monopolistically motivated. The cartel holds together rather because its mechanics are efficient in meeting the aims both of its members and of consumers, reinforced by unique characteristics of product demand which would result in permanent market collapse if cartel discipline was breached.

The CSO is a market driven institutional outcome. It is there to meet a market demand, to maximise the joint value of mutually beneficial trades (including those with ultimate consumers, past, present and future). Monopolistically motivated cartels exist to maximise the value of trading to one set of traders only (buyers or, more usually, sellers). An efficiency-motivated cartel exists for the former reason. The CSO, marketing goods with a strong Veblen effect built-in to their demand, exists for that reason. It simultaneously engenders very long time horizons in the decision-taking processes of all of its participants. Break-down, contrary to monopoly cartel theory, then becomes unlikely.

The CSO, of course, would be easy to break up. Legislative rulings to that effect would be quite enough. This, in turn would impact on the entire industry. If the argument above is correct viz., that diamonds are a Veblen good, there could then be very great hardship indeed for all industry members, miners, cutters and polishers, and consumers.

Chapter 7

How the Competition Act (1998) could impinge on the De Beers/CSO arrangements

De Beers is a South African-registered company, while the CSO has its headquarters in the UK. The “sight” system operates in London, Lucerne and Johannesburg, with approximately 170 sight holders of whom 17 operate exclusively at the Johannesburg sights. The diamonds offered in Johannesburg “boxes” are of a higher quality – on average – than those offered in London or Lucerne since Johannesburg sight-holders and the cutters they represent cannot economically purchase, cut and so dispose of diamonds of a lesser value. (South African cutting costs per hour are high, unlike those in India, and they are not yet offset, as they are in Tel Aviv, by entrepreneurial flair.)

The particular legislative and export duty arrangements which permit De Beers to export its relatively heterogeneous local output but offer a relatively homogeneous quality of box to South Africa sight holders are not discussed here, except to note that the intention of the law is to encourage the existence and growth of a local diamond-cutting industry.

Turning in particular to the Act

Section 4.1 prohibits restrictive horizontal agreements. This could be interpreted as applying to De Beers and other miners as they agree with each other to participate in the CSO. If it is so interpreted then it should be regarded as an exceptional agreement under Section 4.1(a), in which case the prohibition falls away since there are “efficiency, or other pro-competitive, gains” which result from the agreement. (Transactions costs are lower, market throughput is stabilised, and, without the protection given to the Veblen effect, the market would collapse and not exist at all.)

However, Section 4.1.(b) prohibits horizontal restrictive practices which

- 1) directly or indirectly fix a purchase or selling price;
- 2) establish production quotas;
- 3) divide markets by allocating goods;
- 4) include collusive tendering.

Each of these four is a possible reason for the sight system to be investigated by the authorities.

Unlike Section 4.1.(a) no trade-off argument or exception is permitted. Given the discussion above this could prove to be a major deficiency in the Act, and have major negative implications for the industry.

Section 5 prohibits restrictive vertical agreements, although a competition/efficiency trade-off argument can again be used for exceptions. The mines-CSO-sight-holders relationship is vertical. Furthermore, it can be argued again (as under Section 4.1(a)) that the agreements do not lessen but permit competition, since without them the market would not exist at all. Again it can also be argued that the efficiency defence holds.

Section 7 indicates that De Beers and the CSO can be regarded as dominant firms in terms of the Act. (They have over the legal threshold of 45 per cent of the market.) However, dominance *per se* is not illegal. Dominant firms must not (Section 8a) charge excessive prices to the detriment of consumers. As argued this is not applicable to the diamond industry, due to the Veblen effect. (And to competition from other luxury goods.) A dominant firm (Sections 8c and 8d) must also not engage in various “exclusionary acts”. The “box” and “sight” system could be regarded as exclusionary. But again both can be defended under the Act on the competitive and efficiency grounds already discussed.

Chapter 8

Summary

The so-called diamond “cartel” is not a product of anti-competitive practices. It has its economic (although not necessarily its historical) origins in cost-reduction and consumer satisfaction requirements. The *1998 Competition Act* is unlikely to pose a legal challenge to the cartel’s existence – with the exception of Section 4.1.(b) which strangely (in the context of other provisions in the Act) is a *per se* prohibition allowing for no defence from an accused party which can demonstrate that its activities are welfare enhancing from an economic perspective. This defect in the Act should be remedied.

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