# DE BEERS: A DYING CARTEL

# FORMATION, DYNAMICS & REPRECUSSIONS OF ITS FALL

#### BY:

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#### A. EXECUTIVE SUMMARY

For my thesis, I have investigated the strategic position of De Beers in the Diamond Industry. The subject of my investigation revolves around the identification of key reasons that have cataclysmically caused the fall of one of the world's most successful cartel arrangements - De Beers — and its possible repercussions. My research further aims to inquire whether the weakening position of De Beers will continue and what sort of re-structuring would be necessary for De Beers? Moreover, what would be the possible future path for De Beers owing to its weakening state?

For my thesis, I have analyzed the key components that have led to the formation of the De Beers Cartel, its dynamics, and factors that have led the Cartel to disintegrate in recent times. I have looked at the economic model of a traditional Cartel and determined the market conditions that are needed to prevail for its existence. To follow through, I have compared the functioning of the traditional Cartel model to that of De Beers'. This has allowed me to analyze the key operational characteristics of De Beers that have enabled it to sustain its cartel arrangement. In my further analysis, I have studied the operation and maintenance strategies used by De Beers. Furthermore, through my study of the diamond industry, I have been able to identify key members of the distribution channel that are directly affected by De Beers' operations.

Thus, in my investigation of De Beers' fall, I have analyzed the specific traits and factors of the cartel's formation, operation and maintenance strategies that have changed over time and their effect on the members of the Cartel. Moreover, I looked at the consequence facing De Beers due to this process. Through my investigation, I found that De Beers' business relations with many African countries have substantially changed. From Angola, to Democratic Republic of Congo,

Nigeria and parts of even South Africa, De Beers' is facing both legal and economic challenges. In few of these places De Beers has been forced to close down its operation, which has significantly reduced its control over market supply. Furthermore, political antagonism against De Beers' dominance and the increased power of antitrust regulators has increased the probability of remedial action against De Beers. In addition, other key important reasons behind De Beers' fall are:

- De Beers lack of support to independent African miners and its use of "colonial rule" strategy: Since the very beginning, De Beers has been exploiting the abundant diamond resources of Africa to sustain its Cartel arrangement. The interest and welfare of African countries has hardly been addressed by De Beers. De Beers' mines the diamonds in Africa and ships them to London for further processing and distribution. The operation dynamics mimics the colonial economics practiced by Britain for decades with its colonies. In recent times, African governments have displayed considerable resentment and they no longer want to be treated as just "suppliers of raw-material."
- Rise of revolutionary Business Entrepreneurs like Lev Leviev: While formulating contracts with African governments, Lev Leviev focused in areas that De Beers failed to deliver, for example, integrating African interest in "doing more than just supplying rough diamonds," by encouraging forward integration in operations within African boundaries (processing & manufacturing of polished diamonds). Furthermore, unlike De Beers, he has aimed to deliver greater value to buyers by offering them flexibility in their purchase of rough-diamonds and not merely dictating type, quantity and price of diamonds.

Through the "black-box" trade or sight – term for the process in which De Beers sells its un-cut diamonds or rough to chosen "customers" or sight-holders – De Beers has seen to command the quantity, type and price of diamonds sold to each of its "customers." Labeling the sight-holders as customers is ironical because De Beers' dominance in the market renders them powerless. For example, sight-holders can simply reject or accept the diamonds that De Beers has to offer. They cannot choose what type of diamonds they want. Hence, manufactures are unsatisfied with the operations of De Beers and are turning to independent miners who can promise them a reliable source. For example, De Beers' sources reported that in recent years "individual manufactures have reduced their procurement from De Beers and have constantly increased their procurement from independent mining companies." This practice has also considerably encouraged the disintegration of the De Beers' Cartel.

Further, I have analyzed the consequences facing De Beers due to its fall. Based on my research, I have come to the following deductions:

- De Beers should pursue Lev Leviev's "levitation strategy" integrate African government interest, by promoting investment within Africa, providing greater value to buyers and not merely exercising the "black box" sale of rough diamonds.
- De Beers should address the need for branding as the business has been seen to shift "progressively from supply controlled to demand driven one."
- However, the most surprising aspect of my findings is that De Beers does not have to be extremely worried on its decreasing market control, as the industry will require De Beers'

dominating presence. Hence although, the bargaining power of De Beers' is weakening, its presence and dominance can be restored after it alters its operations.

Thus in my conclusion, I deduce that in the short-run De Beers may be perceived as a "Dying Cartel," however, in the long-run, the same hypothesis fails to hold as a direct consequence of — what I call — the "De Beers' Stabilizing Effect." In order to validate my findings, I have looked at the importance of this effect by comparing the Diamond Industry to the Ruby Industry, which lacks the presence of a planned and centrally-organized structure (*De Beers' Stabilizing Effect*) that can maintain, sustain and create ideal market dynamics. Unlike the Diamonds market, a ruby is far rarer in quantity, close to a ratio of 1:300 relative to the know diamond resources in the world, however, the price of ruby is only 1/30 that of a diamond. The mere enforcement of this effect by De Beers' has allowed it to sustain one of the most profitable and structured precious-stone industry in the world.

#### B. CARTEL

"People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or some contrivance to raise prices."

- Adam Smith

#### **Meaning of a Cartel:**

"A cartel is a group of formally independent producers whose goal is to increase their collective profits by means of price fixing, limiting supply, or other restrictive practices." In most countries, they are restricted by antitrust laws; however, they continue to exist nationally and internationally. Cartels by nature usually occur in oligopolies, where there are "a small number of sellers and usually involve homogeneous products. In most cases, Cartels take undue advantages of the loopholes in the legal provisions and are "theoretically akin to monopolies but in practice are far more menacing and damaging in effect."

#### **Formation of a Cartel:**

Typically, any strategic action taken up by a firm is in foresight of a future profit to be realized. Firms group into a cartel so that they can raise profits. Due to certain market conditions, firms can earn greater profit by coordinating their operational activities rather than acting independently. In the formation of a Cartel, the characteristic features are:

- The market typically provides for low organizational costs, i.e., there are few firms, few large dominant firms or a national association grouping the existing firms, i.e., there are small number of significant suppliers<sup>3</sup>
- There are many small buyers
- Rigorous barriers to entry provides for limited competition
- Availability of few substitutes

- Demand being relatively price inelastic could be a favorable factor,<sup>3</sup> for if demand is elastic, the potential for increasing profits decreases and so does the incentive to create a cartel.
- The Cartel, if formed, would control the market dynamics
- The Cartel, if formed, can be maintained, because cheating (cartels often fail because each firm in a cartel has an incentive to cheat on the cartel agreement by producing extra output or lowering its price) can be detected, prevented, and there is low expectation of government intervention<sup>3</sup>

#### **Determinants of Cartel profitability and success:**

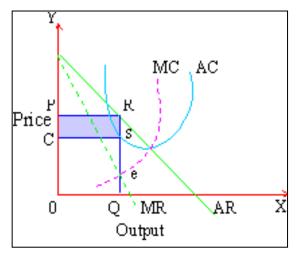
The primary elements for the continued success of a cartel are:

- Agreement: A formalized agreement on the levels of output or price<sup>4</sup>
- <u>Monitoring:</u> A system to monitor the effective quantities produced or the prices applied by each cartel participant<sup>4</sup>
- Enforcement: A system for punishing violations of the cartel agreement<sup>4</sup>

With reference to the cross-section studies of international cartels by Eckbo (1976) and Griffin (1989), it is found that cartel profits are increasing in industry with high concentration and cartel market share. Moreover, homogeneity of firms within a cartel increases cartel success. Through these studies, it was also found that "efficient" functioning cartels tend to consist of firms with similar costs and cartels that are made up of a small number of similar sized firms are more able to raise price. Furthermore, industries with high entry barriers are less likely to be collusive. More so, the ability of the cartel itself to create barriers to entry also provides for a considerable factor for a cartel's continued success.

#### **Cartel Equilibrium:**

A Cartel is a type of a monopoly organization and its equilibrium follows that of a monopoly. In the below diagram, MR is the marginal revenue curve of a Cartel and the light blue line is the demand curve.<sup>6</sup> The equilibrium quantity is at MR=MC. In the figure MR and MC have a common intersection point being 'e.' At this point the Cartel produces a quantity of 'Q' and is the only profit-maximizing condition.<sup>6</sup> At this quantity of production, the Cartel charges a price of 'P' which is determined by the corresponding point 'R' on the average revenue curve. Thus,



the total revenue of the monopolist is:

$$TR = OQ \times P = OQRP.^6$$

On the other hand, a point on the average cost curve governs the total cost. S or C is the average cost of producing output Q in which the total cost will be:

$$TC = OQ \times AC = OQSC.^{6}$$

Thus, the profits of the monopolist as the difference between TR and TC are: Profits = TR - TC = OQRP - OQSC = CSRP. Hence, CSRP are the profits realized. These profits look similar to maximum normal profits under free market competition. However, in a Cartel, profits are permanent and enjoyed in the *short as well as the long run*. There is no fear of monopoly profits being competed away. Moreover, profits arise out of *control system* in the market. The Cartel follows restrictive policies and charges an *artificially higher price*, which is the primary source of profit.

## C. DE BEERS: THE DIAMOND CARTEL FORMATION & DYNAMICS

"People buy diamonds out of vanity and they buy gold because they are too stupid to think of any other monetary system which will work – and I think vanity is probably a more attractive motive than stupidity."

- Henry Oppenheimer (Current Chairman of De Beers)

#### **History & Formation of the Cartel:**

- Till late 19<sup>th</sup> Century, Diamonds were extremely rare and found in Brazil and India
- In 1870, large diamond mines were discovered near the Orange River in South Africa. This discovery left the independent few diamond producers unsettled as they feared diamonds would become a commodity instead of a luxury item<sup>3</sup>
- In 1888, the suppliers incorporated De Beers Consolidated Mines in South Africa in order to secure high market prices of diamonds. In the beginning, the diamond cartel successfully controlled the worldwide supply of diamonds by regulating mine output and by buying exclusive mining rights from African nations<sup>3</sup>
- By the beginning of the 20<sup>th</sup> Century De Beers consolidated 90% of the international diamond trade. As De Beers took control of all aspects of the world diamond trade, it assumed many forms. In London, it operated under the innocuous name of Diamond Trading Company. In Israel, it was known as "The Syndicate." In Europe, it was called the "Central Selling Organization" (C.S.O.)<sup>3</sup>
- In 1930's however, demand for diamonds were steadily declining and as a result, Harry Oppenheimer, son of the founder of De Beers and his advertising agency N W Ayer came up with a strategy that would target young men buying engagement rings and instill in them the idea that a diamond ring was the *only acceptable declaration of courtship*.<sup>3</sup>

- By 1981, De Beers had proved to be the most successful cartel arrangement in the sphere of modern commerce.
- Currently, De Beers controls two-thirds of the \$7bn yearly trade in uncut diamonds and owns 46% of the producing mines. Moreover, approximately 80-85% of the rough diamond distribution is managed by De Beers which has approximate turnover of \$7.1bn<sup>3</sup>

#### **Market Structure & Control System of the Cartel:**

Contrary to public knowledge, Diamonds are cheap to produce and would be lower in price but for the global cartel operated by De Beers, the price is artificially maintained at high levels. De Beers until present has been seen to dominate a strong monopoly position in the industry. Gem diamonds are different from most other natural minerals as they are non-homogeneous. Unlike gold, they do not have a standardized monetary value. Each diamond varies by color, clarity, weight (carat) and cut; as a result, prices vary significantly and one diamond compared to another is not necessarily a tradable substitute. At the micro level, owing to the wide variation in diamond quality, the volume of a producer's output is not a reliable indicator of the value of its production. Price differentials, lack of homogeneity in diamonds is such that market segmentation is much more of an issue than in comparable situations.

What primarily drives the major rough diamond producers to co-operate is that there is no guarantee that independent marketing will realize higher sales revenues than centralized selling over the life of a De Beers' sales contract. Key factors discussed previously on dynamics of typical cartels apply greatly to De Beers that render it suitable to cartelization:

- There are a small number of significant suppliers and rigorous barriers to entry.

- Product is durable, has a high value to volume ratio and is easy to store. More so, there are very few substitutes.
- The demand for jewelry-quality gems, which make up 90% of the rough diamond market, is relatively price inelastic

#### **Operation of the Cartel System:**

De Beers and its associate companies potentially buy rough diamonds from the mines, value them and then sell them to "sightholders." De Beers central strategy is to "exercise control over the market and thus maintain rough prices at the highest sustainable level, in essence aiming for long-run revenue maximization over the whole of the demand cycle rather than short-run market clearing at spot prices." Contrary to normal cartels, the diamond cartel controls supply and strongly influences demand. Most importantly, it has developed an expertise in matching "supply to demand and the financial strength to operate an extensive buffer stock, capable of holding rough diamonds temporarily off the market."

The major characteristics of the Diamond Cartel are as follows:

1. Existence of Producer Quotas: Most significant producers have a long-term and exclusive contract to supply a certain proportion to De Beers. This contract ensures that the burden of weak markets is passed directly back to the mines. Furthermore, this commitment by the cartel to purchase regardless of the state of demand provides guaranteed cash flow and price stability. This induces the diamond manufacturing trade to continue buying as they are confident that the market has long-term support. Thus, in a rising market, the cartel benefits from both higher prices and stock appreciation as goods are sold from the buffer stock. Yet in a weak market, it bears the full brunt of financing the buffer stock and its

commitment to purchase from producers.<sup>7</sup> Thus, although De Beers mines majority of the world's diamonds, it persuades other diamond miners to market their diamonds through De Beers London-based Central Selling Organization (CSO), the clearing house, which then grades and sells rough diamonds to cutters and dealers for further distribution.<sup>8</sup> Hence, De Beers stands at the forefront of the distribution channel. The CSO processes over 80% of the world's diamonds; as a result, it has the power to regulate supply.<sup>3</sup>

- 2. The cartel has created strong antidote to any producer's incentive to cheat, with the ability to release from its own stocks a supply of any type of diamond. This means that the stockpile-supported price can drop dramatically as the market is flooded with a similar type of stone, released from the buffer stock by De Beers. This punishment was enacted against Zaire in 1981 when it chose to market its production to traders in Antwerp independently of the cartel.
- 3. Swing producer: It can play the role of the swing producer as its own mines are among the cheapest sources of fine diamonds in the world.<sup>7</sup>
- 4. Market control at wholesale level: The cartel competes with independent traders for diamonds mined outside its own production network. When markets are weak it mops up excess supply by outbidding the independent traders and conversely allowing them to bid as they wish when markets are strong. An important element of this system is the participation of rough diamond cutters. "On every fifth Monday of the year, a select group of diamond dealers is invited by De Beers to the London Headquarters of the cartel, to collect a sack tied with a ribbon or the "black-box." Inside is a cardboard box containing a selection of uncut diamonds worth on average between \$2-\$5 million, which more or less correspond to the dealer's prior request, but ultimately the choice of diamond supplied in

the box is at the discretion of De Beers. A box must be either accepted or rejected in full and price haggling is not permitted. This ritual is called a sight." The invitation to a sightholder to attend is considered a privilege within the industry, with a corresponding loss of status if permission to purchase is withdrawn. Through the "black-box" trade De Beers has seen to command the quantity, type and price of diamonds sold to each of its "customers." Labeling the sight-holders as customers is ironical because De Beers' dominance renders them powerless. This further illustrates one of the most oppressive characteristics of the Cartel arrangement. How and why De Beers can get away with this, is an interesting question. With one of the world's largest diamond mines at its disposal, it can promise consistent and quality supply. Although, rough or un-cut diamonds can be sourced from other suppliers, the quality, yield and production efficiencies are greatest for stones sourced from De Beers'. Moreover, with high capital investment and increasing cost of working capital, large manufactures that demand, roughly about, \$20-\$25 million worth uncutstones or rough each month cannot sustain their operations if they do not bend to De Beers' ways. If they do not buy stones from De Beers they will not be able to source their rawmaterial from any other existing suppliers, as no one has the resources, stock pile or infrastructure to sustain and mange supply at such large levels.

5. Finally, the cartel pays careful attention to demand management, operating a highly successful worldwide advertising campaign. This campaign is aimed at attracting the consumer's attention to the particular type of stone De Beers needs to sell, corresponding to the composition of the buffer stock at a point in time.

#### **Maintaining the Cartel System:**

As I have discussed earlier, a cartel is a group of formally independent producers whose goal is to increase their collective profits by means of price fixing, limiting supply, or other restrictive practices. However, cartels are difficult to maintain due to the incentive for one of the members to cheat in order to improve profit. De Beers has managed to sustain its version of a cartel almost since inception by using a variety of techniques that have changed over time, including government regulation, supply control, purchasing restrictions, revenue and cost optimization and clever marketing.<sup>9</sup>

- Government Regulation: The government also plays a dominant role in the continued existence of De Beers Cartel arrangement. It is only possible for a cartel to operate if there is a governing body that can enforce its existence. The government of South Africa and other governments essentially protected De Beers' that was providing them with easy and centrally collected tax revenues. However, as per my research suggests, this argument of government-forced cooperation only held while Africa was the dominant supplier of diamonds, however, it no longer has the complete *stranglehold* it once did.
- Supply Control & Restrictions: De Beers, through its Diamond Trading Company (DTC), maintains a costly program of monitoring and apportioning sales of uncut stones and is open to negotiation with other producers to ensure that they continue to sell through DTC. Moreover, the maintenance of a buffer stock allows De Beers to regulate supply by meeting incapacities and irregularities of production in mines and at the same time constricting supply to maintain price levels. Thus, these techniques adopted by De Beers' also allows for it to perpetuate the luxury and scarcity perception associated with diamonds.

- <u>Minimizing transaction costs to its members within the cartel:</u> These savings contribute to economies of scale with respect to "pre-contractual opportunism through its group method of selling, information search costs, measurement costs and bargaining costs."
- Pivotal force in maintaining cartel arrangement: Marketing: The demand developed for diamonds is not typical and must be analyzed using Veblen's theory of conspicuous consumption. This theory replaces the traditional downward-sloping demand curve with one that is upward-sloping, which implies that the higher the price of an item, the higher the demand. Veblen defines conspicuous consumption as the waste of money and/or resources by people to display a higher status than others do. 10 Moreover, he further stated that conspicuous leisure is the waste of time by people to give themselves a higher status. In this state of the market, it is in a company's best interest to maintain high prices. Thus, the perception of desirability associated with diamonds is critical to the life of the industry as a whole and that if the price of diamonds falls, the overall demand for them will follow. Thus, by cheating, the cartel would actually lower the profits. De Beers has maintained, if not increased, the consumer desirability associated with diamonds through its extensive advertising campaigns in almost all emerging and developed consumer markets. For, as commented by Edward Jay Epstein, "An unruly market may undo the work of a giant cartel and of an inspired, decades-long ad campaign." The diamond invention is far more than a monopoly for fixing diamond prices; it is a mechanism for converting tiny crystals of carbon into universally recognized tokens of wealth, power, and romance." <sup>11</sup>1111 Both women and men had to be made to perceive diamonds not as marketable precious stones but as an inseparable part of courtship and married life. Moreover, as studied by Epstein, to stabilize the market, De Beers endowed these stones with a sentiment that

would inhibit the public from ever reselling them. The illusion had to be created that diamonds were forever -- "forever" in the sense that they should never be resold. Lastly and above all, young women were encouraged to view diamonds as an integral part of any romantic courtship.

In addition to above, the marketing campaign came so close to affect every element of lifestyle that it soon was taken for granted that the only way a man courts and wins his woman is through a diamond ring. For example, Movie idols, the "paragons of romance for the mass audience," would be given diamonds to use as their symbols of in-destructive love. <sup>11</sup> Furthermore, fashion designers and magazines stressed on stories of the "trend towards diamonds" and influenced greatly the public to perceive an ordinary stone, as De Beers had planned. Most influential, were the ads that De Beers places in magazines that preempted fashion, love, courtship and elegance. (Refer to Appendix for Sample Ads)

Value chain analysis indicates that De Beers leaves much of the upside of the value to the art of manufacturing and cutting the diamonds, wholesale and retail divisions. It is in those areas that the prices of diamonds augment and value is created, thus reducing the possibilities of having one of these players complain. Given below (next page) is a graph of the average increase in value of 0.5 carat of a diamond as it progresses down the diamond pipeline. As displayed by the graph, the price of diamonds increases approximately four times its cost of mining, in the later stages of distribution. This allows De Beers to control the attractiveness of the pipeline, which primarily lies to the cutting units, wholesale and retail networks. By constricting value added in the initial stage of the pipeline, allows De Beers to limit the power of its suppliers. Moreover, as De Beers dominates supply once it

sources the rough diamonds from suppliers it in-turn limits powers of the buyers of rough stones or *sight-holders* through its "*black-box*" trade discussed previously.

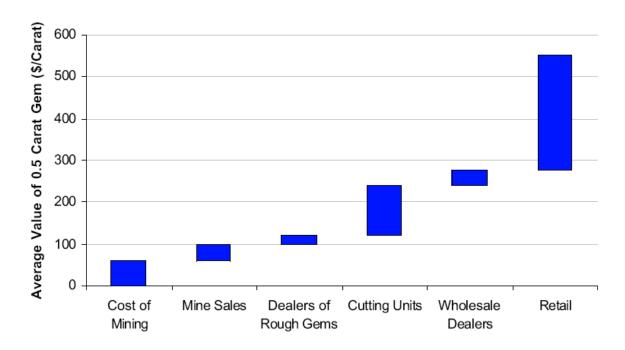


Figure 1: Stage of Value Chain<sup>9</sup>

Overall, the *artificial high pricing* by De Beers to its clever marketing efforts generating demand and leaving much of the upside of the value to the art of manufacturing, wholesale and retail level, is eventually what maintains the cartel system. If prices do fall, the perception of diamonds would also be affected and ultimately decrease ownership satisfaction. This in turn would considerably decrease demand and damage the entire industry.

#### **Analysis of the Global Diamond Industry:**

As depicted in the diagrams below (the following page after next), the Diamonds Industry can be divided into four main categories: Mine Production, Distribution, Preparation (Cutting & Polishing) & Retail Sales. Further, "The Traditional Diamond Pipeline" diagram is a representation of the path that diamonds follow through the industry. Traditionally, diamonds followed the path through Central Selling Organization of De Beers. However, in recent times the proportion of the world's diamonds surpassing De Beers has increased considerably owing to a number of reasons that I have found through my research and analysis. However, lets first look at the diamond industry in brief:

Mine Production & Distribution: South Africa, USSR, Namibia, Angola, Botswana, Congo, Australia & Canada count for the majority mine production of diamonds, *rough* being the lingo for this specific output in the industry. De Beers single handedly dominates mine production in Botswana, South Africa and Namibia accounting for approximately 40% of world production. In other countries, De Beers maintains a strong market presence through cartel arrangements, contract purchases and partnerships, which increases its mining capacity close to 70%-85% of world production. These estimates are of year 2000-2001. However, today De Beers mining capacity and control is approximately 45%-50% from mining operations in South Africa and from mines owned and run in partnership with the governments of Botswana, Namibia and Tanzania. The remaining percentage accounts from alternative distributions & direct sales from independent miners. The *rough* diamonds that reach the De Beers Sales and Marketing arm, Diamond Trading Company (DTC), then undergo a process of grading and sorting, after which the *rough* diamonds are sold to "sight holders."

- Preparation (Cutting & Production): One of the most important stages in the value chain involves the cutting and polishing of the *rough* diamonds. Mumbai, India is extremely specialized in these operations and production capacity accounts to a close of 85% of world production. Other important centers are Tel Aviv (Israel), New York, London, Antwerp (Belgium). Small and mid-cap companies flourish in the differentiated art of cutting and polishing the diamonds for example, rounds, princess, tapers, baguettes to other fancy shapes. Over the years, the industry has seen significant growth and innovation in the art of cutting rough diamonds. Businesses pride themselves in being the largest producers and suppliers of specific "cuts" of diamonds and it is a custom to go to select producers for the source of specific "cut" diamonds. The next step in the value chain is the retail industry and then finally a role of a diamond as an integral "raw-material" in jewelry manufacturing. The polishers of the world are largely at the mercy of De Beers, since it is the only dominant supplier. With price fluctuations and cartel dynamics at play, the implications of the cartel arrangement go much beyond the primary players of the Cartel. If any changes to the cartel arrangement such as, price changes, loss of market share, increased supply, constrained supply and etc. occur, its effects radically taper down the distribution channel to the polishers, which add the most significant value and to retailers and so on. Thus, the decreasing market share of De Beers has strong repercussions on the entire diamond industry.
- Retail Sales: Retail Sales of *loose* diamonds are spread throughout the world. From America, being the largest retail market, to Japan, U.K., rest of Europe and Hong Kong, the retail market amounts to an approximate \$45-\$55bn annually.

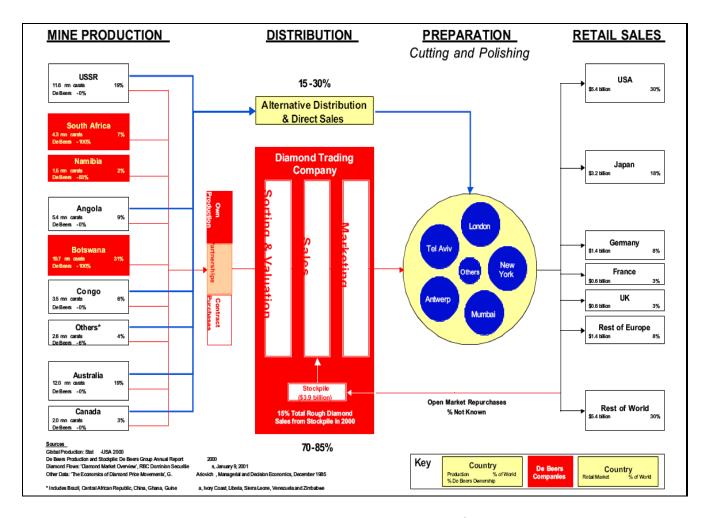


Figure 2: The Diamond Industry<sup>9</sup>

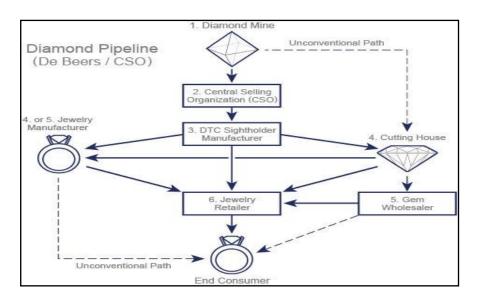


Figure 3: The Diamond Pipeline Source: De Beers

#### D. DE BEERS: A DYING CARTEL

#### **Problems of the Cartel:**

- <u>In recent years, the diamond cartel has lost control of diamonds produced in several</u>

  <u>African countries</u> (E.g. Angola & Democratic Republic of Congo)<sup>3</sup>
  - Africa: De Beers has had a long history of mining in Angola. It has been the major shareholder and buyer of Angola's diamond in 1985. After 1985, relations with the government broke down and in 1991 after the first peace accords were signed, De Beers and Endiama (state mining company) signed a new contract. 13 However, in year 2000, the contract broke down again and this has led De Beers ultimately to seek international arbitration of its contracts. In fact, with government-initiated efforts De Beers has been forced to give up its buying rights to ASCorp (Angola Selling Organization) and its prospecting areas. 13 Similar to Angola, Congo has also given De Beers problems in its current organization and with lack of adequate support from governments, De Beers is also forced to manage a change in its strategy. Nevertheless, in Congo De Beers has lost control over 8% of world diamond reserves. In an analysis of these incidents, what is certain is that, Africa, which produces 60% of the world's diamonds, wants to do more than just supply rough stones - "De Beers has failed to properly appraise the aspirations of African Governments," says Chaim Even-Zohar, a prominent diamond specialist. 14 "Now it is payback time." Gone will be the days when African diamonds were shipped to London to be sorted and aggregated in lots before being sold. 14 With continued liberalization of government policy, reduced militia rule and strong emphasis on global trade dynamics, African governments are becoming pro-active in their approach and they feel it important to capture most of the value of the Diamond

Pipeline for economic development. Thus, African governments are resenting De Beers' operations that prohibit African interests. However, the goals of African countries are still far-fetched. For example, with political and economical instability, the power of African governments single-handedly to manage and supply their diamond trade, without the support, knowledge or intelligence of a powerful player like De Beers is questionable. In addition, it is seen that while Angola produces many higher-grade stones, outside sales have been negligible due to lack of management experience and increased corruption in the country. Overall, even after loss of control over certain areas in Angola, which produces approximate of 9% of world production, De Beers remains a solid, dependable supplier of diamonds with regular client base and inexhaustible market knowledge and intelligence.<sup>15</sup> Nevertheless, by leaving much of the upside of the value to only the art of manufacturing and cutting the diamonds reduces the possibility of manufactures to complain, but has increased the possibility of mining countries to complain. De Beers should strongly consider in addressing this issue as, De Beers will be able to sustain its position only as long as the mining countries have confidence and stand at a gain in working with De Beers.

Russia: Outside Africa, the company is also fighting to hold onto its monopoly rights to distribute diamonds produced in Russia, which holds 26 percent of known reserves. Since the discovery of diamonds in Siberia in the 1950's, Russian Diamonds have been sold to the West in arrangement with the Central Selling Organization of De Beers. Recently, it has ceased to subscribe to market disciplines and large shipments from Russia's stockpile accumulated during the Cold War era have leaked. Nevertheless, Russia is known to have significant long-term diamond resources, yet underdeveloped.

As a matter of fact, while it may seem that with De Beers' continued battle and its failure in acquiring its monopoly rights to distribute diamonds produced in Russia may destabilize De Beers' control, on the contrary, it is found that unprecedented delays in issuing export licenses has halted most diamond sales. Russian mines have also had production problems and "its once-feared diamond stockpile is reportedly on the brink of depletion." Thus, with lack of dependable supply and efficiencies in production, Russia, single-handedly does not pose a threat.

Australia: Australia's significant Argyle mine recently left the cartel, which also poses considerable setback to De Beers' position in the lower end market of rough diamonds. Even though the diamonds mined in Australia are of poor quality, Argyle is the largest mine in terms of volume in the world. Australian producer Rio Tinto plans to ignore De Beers and create its own market with Indian cutters and polishers. Furthermore, Rio Tinto's partner ABER has bypassed De Beers entirely and signed a 10-year deal to sell directly to Tiffany. This is an example of "competitors gaining confidence and directly challenging De Beers and its entrenched distribution system."

The loss of control of existing mines has decreased the bargaining power of De Beers. But, De Beers is still the largest producer of diamonds. Since the independent miners and De Beers share the same interest in maintaining high prices, the central clearing system that sustains high prices could yet survive a bit longer. Perhaps, De Beers in due course could be able to run a quasi-cartel that prevents the diamond market from free competition.<sup>17</sup> Nevertheless, Gareth Penny, De Beers' managing director holds the opinion that there has been a shift "from a supply-controlled business [colonial era] to a demand-driven one [post-colonial era]."<sup>14</sup> This comparison of the diamond industry to a colonial empire can

be supported by an analysis of the formation and historical background of De Beers. Prior to De Beers' formation, large deposits of Diamonds were found in South Africa. Diamond miners and merchants feared that with abundant supply, diamond would quickly loose its value. This led to the formation of the De Beers Consolidated Mines in 1888, during the height of the British colonial expansion and consolidation. Having further analyzed De Beers Consolidated Mines, I believe that it implemented and followed similar practices as Britain did with its colonies. De Beers controlled supply ("supply-controlled business") and maintained artificially high price levels. Furthermore, De Beers has been managing African countries as the British Empire had managed colonies with rich natural resources. The only difference being, the British Empire was formed through power and supremacy and the De Beers Cartel was formed as a legal (in those times) economic model. However, under the current bureaucracy and supply-play practiced by De Beers, it has been hailed as an oppressive force rather than a supporter to the independent miners. If any of the worlds' significant miners do not cooperate, De Beers, with the supremacy of its supply position, threatens to flood the market and drive the prices down for diamonds. Hence, De Beers has overpowered and dominated (economic force) the diamond industry, while the British Empire had controlled its colonies with violence/force (man-force).

"So how is it that the tables have turned against De Beers?" Very similar to colonial history, independent diamond miners (like political parties in a colony) succumbed with resentment under the De Beers (British). Moreover, as time passed, grievances multiplied and independent miners began to cooperate with each other and rise against the growing power of De Beers. With new discoveries of diamond mines across the world, political

anti-trust regulators lobbying against De Beers' and gradual termination of mining contract by government backed regulations, resulted in a cataclysmic effect on the De Beers' Cartel arrangement. As a result, in recent times the numbers of independent sources of rough diamonds have tripled and the business has progressed to a *demand-driven one*. However, I feel that the most important standpoint in De Beers' history is the emergence of Lev Leviev. Lev Leviev is symbolic to the American or French Revolution or the *Gandhi* of the Diamond Industry. Under Lev Leviev, De Beers has been forced to see revolutionary changes. However, the emergence of Lev Leviev has been a consequence of the current *colonial* structure of operations by De Beers. Thus, I believe that this colonial strategy of De Beers has triggered the downfall of De Beers with increasing number of independent miners participating independently from the cartel.

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# The operational dynamics of the De Beers Cartel mimics the colonial empire of Great Britain years ago:

De Beers has been practicing its oppressive Cartel trade similar to Britain's strategy practiced years ago with its former colonies. The resentment and consequent uprising of the colonies against the suppressive colonial powers soon brought to an end to the World's Greatest Colonial Empires. De Beers is facing the very same threat from its suppliers and government mining partnerships (colonies) across the globe.

#### - Lev Leviev capitalizes on key areas where De Beers has been at fault:

An Israeli named Lev Leviev owns factories in Armenia, Ukraine, India, Israel, Angola and many other establishments to challenge the De Beers Central Selling Organization. His aim is to channel stones directly to polishers at lower prices.<sup>3</sup> Leviev was once a sight-holder of De Beers and today he is the world's largest cutter and polisher of the precious gems and a primary source of rough stones to other cutters, polishers and jewelry makers around the globe.<sup>18</sup> Moreover, he has been expanding rigorously in Africa setting up cutting and

polishing facilities. One of the key things that Lev Leviev is doing that De Beers is not, is that he is purchasing rough diamonds from state miners, processing them in the same country and exporting it to various sales regions. This has allowed it to gain the support of the African government and build long-term mutual relationships, as he has been providing employment opportunities, infrastructural development and foreign direct investment in the countries, much to the contrary of De Beers operations. "Leviev has been a driving force behind the revolution at De Beers," says Richard Chase of Ambrian Partners, an investment bank.<sup>14</sup>

Based on my research, I hold the opinion that the Lev Leviev's way of *levitation* is:

- Contrary to the practices of De Beers, <u>Lev Leviev supported and developed mutually beneficial long-term relationships with independent state-miners and African governments.</u> On the other hand, De Beers dictated the terms of the contract and threatened to flood the market and drive down prices of *rough diamonds*, if the mining companies failed to regulate its supply.
- Large-scale forward integration in mining-countries: While formulating contracts, Lev Leviev focused in areas that De Beers failed to deliver, for example, integrating African interest in "doing more than just supplying rough diamonds," by encouraging forward integration in operations within African boundaries (processing & manufacturing of polished diamonds)
- Providing flexible market purchase opportunities to buyers of rough diamonds: Unlike
   De Beers, buyers were given the opportunity to purchase select categories of rough
   diamonds at a premium from Lev Leviev

- Encouraging flexible payment options and not merely demanding for up-front payment of purchases made, as practiced by De Beers, "black-box" trade
- Elimination of select-buyers or "sight-holder's" category: free market dynamics and anyone with good standing credit could be legible for direct purchases from Lev Leviev, unlike De Beers where only select buyers were allowed to purchase from them

#### Lev Leviev is consolidating in those areas where De Beers has failed.

For De Beers to re-route its falling state it will have to integrate forward, develop relationships with African Government, provide greater value to buyers and hence, consequently follow the Lev Leviev way to levitate its position.

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Through the "black-box" trade or sight – term for the process in which De Beers sells its un-cut diamonds or rough to chosen "customers" or sight-holders – De Beers has seen to command the quantity, type and price of diamonds sold to each of its "customers." Labeling the sight-holders as customers is ironical, as although they should be given the power to act like "customers" De Beers' dominance renders them powerless. Sight-holders can simply reject the diamonds that De Beers has to offer or choose to buy them. They have no say on what type of diamonds they want. This has also encouraged the disintegration of the De Beers' Cartel. Since, manufactures are unsatisfied with the operations of De Beers they are ready to turn to independent miners who can promise them a reliable source. This in turn has created a demand in the industry, "pulling" and encouraging independent miners to source diamonds surpassing De Beers directly to manufactures. In recent years, it has been seen that manufactures have reduced their procurement from De Beers and have constantly increased their procurement from independent mining companies. The oppressive trade practices by De Beers with its

customers has been a considerable concern in the industry and I strongly feel that this should be addressed, when Lev Leviev on the other hand believes in delivering greater value to its customers. This example, yet again shows another way in which Lev Leviev is revolutionizing the diamond industry.

Furthermore, I believe that as a result of the dying cartel, key factors that have previously rendered De Beers to cartelization seem to be questionable now:

Previously: Small number of significant suppliers

Now: Emergence of players, like Lev Leviev, can aspire future independent market players to challenge De Beers consolidated position. Governments of mining countries have nationalized their mines, broken contracts of exclusive mining rights with De Beers and have shown considerable resentment in De Beers' operations. This has resulted in the emergence of numerous independent miners, through which rough diamonds can be sourced independently of De Beers. In addition, with technological advancement in exploration programs, new discoveries of diamond resources around the world, opportunities for emerging suppliers in the market have considerably increased.

• **Previously**: Product is durable, has a high value to volume ratio and is easy to store.

More so, there are very few substitutes.

**Now**: Inexpensive synthetic diamonds might in the future replace real diamonds and thus put an end to the De Beers dominance in the diamond business.<sup>3</sup> The nature of these diamonds is such that it can hardly be distinguished from an original one. Nevertheless, De Beers has already begun trademarking its diamonds with a laser tag,

which will allow it to differentiate, authenticate versus synthetic diamonds. The emergence of synthetic diamonds will probably crash the high value to volume ratio and will mar the image of a *diamond*. This will require extensive marketing campaign and development of the brand of De Beers to counteract any possible damages of the development of synthetic diamonds market.

• **Previously:** The Cartel, if formed, would control the market dynamics

**Now:** De Beers, year by year, is failing to control the market dynamics. This is evidenced by De Beers' efforts to lower its buffer stock, in order to free capital to support its acquisition and merger efforts. De Beers forward steps to branding further propels its desperate need to provoke consumer loyalty. Furthermore, De Beers initiated partnerships with luxury jewelry stores in forward integrating and capturing the retail market is evidence to its loosing control and disintegrating state on the suppliers level. Further, individual tycoons like Lev Leviev and many other independent miners are establishing, consolidating their distribution channels and challenging De Beers' control.

### E. DE BEERS: REPRECUSSIONS OF THE DYING CARTEL & THE FUTURE

With reference to my discussion above, my recommendations for De Beers' future path is:

- Increased production capacity outside De Beer's control, especially in Canada, Russia, Australia, is leading to high costs in sustaining prices through mopping up excess supply on the open market.<sup>16</sup> Thus, due to loss of market control and the fall of the cartel arrangement, I recommend De Beers to, "levitate" like Lev Leviev by:
  - Re-networking relationships with African Governments, especially, Angola and Congo in strategic acquisitions of mining regions and securing exclusive mining rights.
  - Forward integrating: To support establishment of production centers in African mining countries and revamp organizational structure by making African countries more integrated in the diamond pipeline. This will help De Beers build confidence amongst African governments.
  - Consolidating confidence of sight-holders to remain loyal by adapting "black-box" trade to buyers needs. Thus, De Beers should encourage greater flexibility in product offering to sight-holders for grievances of excessive control exercised by De Beers has lead to emergence of strategic rivals like Lev Leviev to capitalize in the market. Since new independent sources of rough diamonds have emerged, De Beers will have to consider altering its "black-box" trade of selling un-cut diamonds or rough.
- Political antagonism against De Beers' dominance and the increased power of antitrust regulators are leading to an increased chance of remedial action against De Beers<sup>16</sup>
  - I strongly recommend De Beers to politically lobby the changes in its current structure of operations, as mentioned above, in order to re-establish confidence of national governments and antitrust regulators.

To maintain artificial high prices and encourage sustainability of the diamond business, as discussed previously in the analysis of the value chain, demand and supply need to be regulated. De Beers needs to actively initiate discussions and negotiations with major independent miners and communicate the need to not to sell cheaply, as long-term effects of which will harm everyone in the industry. De Beers should consolidate its efforts in reinvesting in forming quasi-cartel relationships. Thus, primary aim should be to continue "regulating production, supply, monitoring and negotiating policies of major diamond miners to ensure stabilization of diamond prices, in order to secure an efficient, economic income for producers and supply to consumers" - similar to the OPEC system of functioning. For, even "Leviev competes with De Beers, but he does not want De Beers to die. The diamond market must be stabilized in order for it to exist and the industry believes in De Beers' power to stabilize, [for they have the resources, expertise and **experience].** If prices went down to a totally free-market level, they would become so cheap that nobody could afford to mine them or cut them. If there were no De Beers, it would be necessary to invent a new one."19

In fact, the Industry still needs De Beers for its expertise in maintaining and managing the business. One of the departure points for my research relates to the fact that, although *Rubies* are far more rarer than Diamonds (approximately 300 times) why is the price only  $1/30^{th}$  of a diamonds.<sup>20</sup> Contrary to the diamonds pipeline, there are hundreds of middlemen, mostly Thai, however, there is no structure and formed organization in the Rubies Industry to regulate and manage the trade.<sup>20</sup> Unlike the diamond industry, there is no one to manage the sorting and processing of Rubies in different grades and

classification. On the other hand, there is no formed organization to strategically leverage advertising as done for diamonds, by De Beers. Analyzing the structural differences of the Diamonds and Rubies Industry, it seems quite evident that it has been De Beers that has formed, created and maintained the Diamond Industry and given the attractive conditions of the Rubies Industry, one might speculate, why not a De Beers for *Rubies*?<sup>20</sup> If there were a De Beers' for the Rubies industry, it might have been as attractive as the Diamonds Market.

#### The De Beers Effect – the stabilizing effect

- creates, manages and owns large supplies
- processes, standardizes, grades and classifies –
- advertises, shapes and generates demand –

#### &

#### you have a market and industry for Diamonds or be it even Rubies

- Synthetic diamonds need to market and develop brand image to curb the possible dominance of cheap, artificial diamonds. Marketing efforts should be dedicated to focus on how true natural beauty cannot be substituted by artificial and man-made efforts. Since there is already a strong correlation between De Beers' diamonds-love-courtship, marketing efforts should leverage the perceived image on how artificial diamonds cannot truly stand for the same, as only a *diamond is forever*.
- Consumer awareness of the social costs of diamond production, particularly conflict diamonds, may result in a war on diamonds, akin to the war on the fur trade. Thus, efforts need to be undertaken to address the situation current efforts of tagging conflict-free diamonds with a laser tag may be a successful strategy.

Thus, in my analysis of De Beers: its formation, dynamics and repercussions of its fall, I have strong reasons to prove and validate that:

- A Dying Cartel: The operational dynamics of the De Beers Cartel mimics the colonial empire of Great Britain years ago: De Beers has been practicing its oppressing Cartel trade similar to Britain's strategy practiced years ago with its former colonies. The resentment and consequent uprising of the colonies against the colonial power soon brought to an end to the World's Greatest Colonial Empires. De Beers is facing the very same threat from its suppliers and government mining partnerships (colonies) across the globe.
- Lev Leviev is consolidating in those areas where De Beers has failed: For De Beers to re-route its falling state it will have to integrate forward, develop relationships with African Governments, provide greater value to buyers, re-structure its operations and hence, consequently follow the Lev Leviev way to levitate its position

#### However,

presence as much as it does not want it: Although the industry does not want De Beers presence and is working to curb its dominating control, it needs it and De Beers knows this. Thus, even though entrepreneurs like – Lev Leviev – have risen to challenge De Beers control and miners are leaving the Cartel; De Beers will still hold the dominant market position. However, from now and in the future, it will not have the ultimate say, it will have to re-structure its operations and will have to work with the independent miners in a quasicartel relationship. Although, in the short-run De Beers may be perceived as a "Dying Cartel," but in the long-run the same hypothesis, to an extent, fails to hold as a direct

consequence of — what I call — the "De Beers Stabilizing Effect." As a result of this effect, De Beers provides structure, organization and regulation to the industry, without which the industry would fail to exists. In order to validate my findings, I have looked at the importance of this effect by comparing the Diamond Industry to the Ruby Industry, which lacks the presence of a planned and centrally-organized structure (De Beers' Stabilizing Effect) that can maintain, sustain and create ideal market dynamics. Unlike the Diamonds market, a ruby is far rarer in quantity, close to a ratio of 1:300 relative to the know diamond resources in the world, however, the price of ruby is only 1/30 that of a diamond. Perhaps, further research into the structure of rubies industry would help me identify specific reasons why and how this stabilizing effect did not occur in the rubies market. Nevertheless, it can be seen that the mere enforcement of this effect by De Beers' has allowed it to sustain one of the most profitable and structured precious-stone industry in the world.

Thus, I have strong reasons to believe that De Beers can re-route its falling state based on the recommendations that I have given above. Moreover, since it owns approximately 45% of the worlds known diamond mines and with its current exploration program for new mines, it can leverage its "stabilizing effect" to maintain its dominant control in the industry and differentiates itself from other emerging market movers.

#### F. APPENDIX



Figure 4: Sample Ad 1<sup>21</sup>

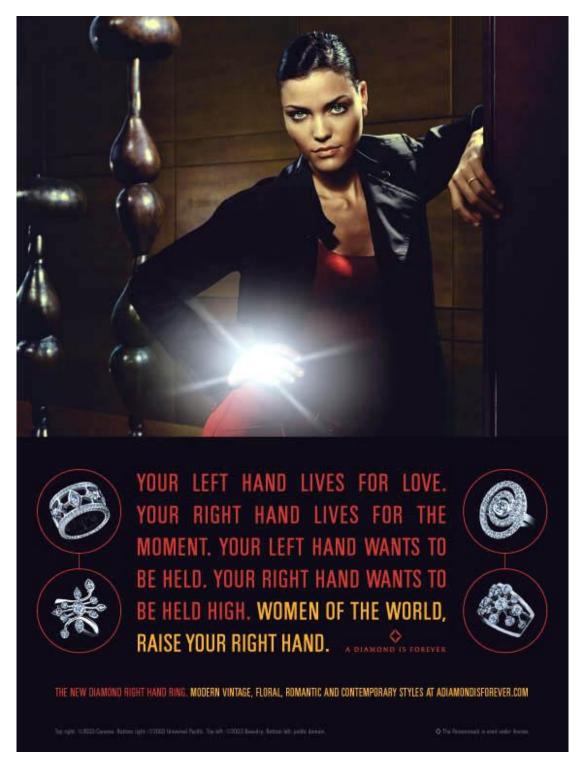


Figure 5: Sample Ad 211



A YOUNG MAN just engaged is apt to share subconsciously the poet's state of mind. He perceives a world of unsuspected beauties-a future in which the Golden Age is reborn in one predestined couple. Unfortunately for lovers, such a mood, while excellent for the discovery of diamonds in the sky, does not always lead to comparable success on earth. There are many things a man must consider when undertaking one of his lifetime's most important purchases-his diamond engagement ring. . . . That with this symbol, he institutes a new dynasty which will bear his name beyond his generation. Once bestowed, it is imperishable. The woman he makes his wife will never relinquish it to meet more affluent circumstances. . . . Each man owes it to his future to give the most beautiful diamond he can buy. There are but a few simple rules for its selection. Goto a reliable jeweler.... Diamond prices vary with weight, color, quality, and cutting. This table will guard you from dubious "bargains." Many jewelers will be glad to assist you in the purchase of a handsome stone by extending payment over a period of months.

DE BEERS CONSOLIDATED MINES, LTD., AND ASSOCIATED COMPANIES

Figure 6: Sample Ad 3 - Early De Beers Advertising (1939)<sup>11</sup>

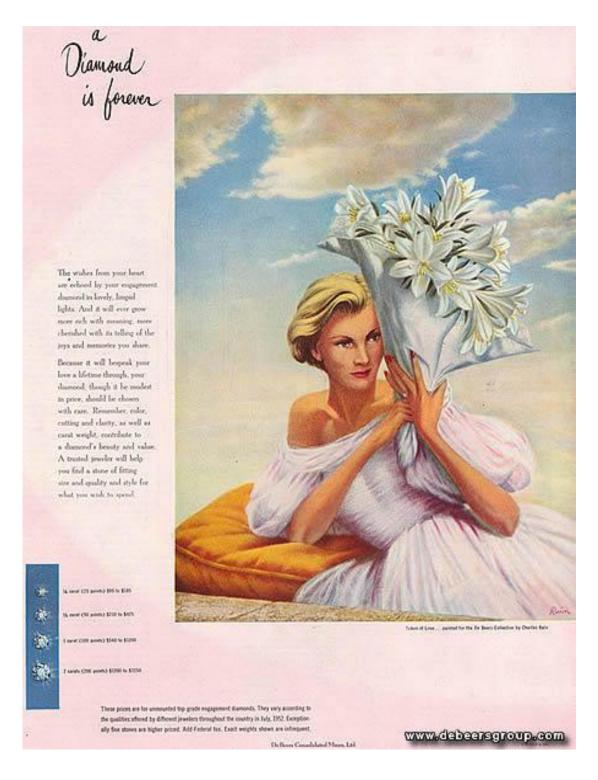


Figure 7: Early De Beers Advertising (1952)<sup>11</sup>

<sup>1</sup>Cartel. Wikipedia: The Free Encyclopedia. 28<sup>th</sup> March, 2007.<a href="http://en.wikipedia.org/wiki/Cartel">http://en.wikipedia.org/wiki/Cartel</a>>

<sup>2</sup>O'Neil, Sean. Pulfrey, Christine. <u>Cartel Cracks, But Will Prices? - prices for diamonds may fall in coming years as De Beers market share falls</u>. Kiplinger's Personal Finance Magazine. Oct. 2000

<sup>3</sup>Vogelsang, Ivona. <u>The International Diamond Cartel</u>. Power Point Presentation. Spring 2005.

<sup>4</sup>The Beer Game, Collusion and Cartel. Sloan School of Management. 12<sup>th</sup> November, 2004. <a href="http://ocw.mit.edu/NR/rdonlyres/Sloan-School-of-Management/15-010Fall-2004/49244E1B">http://ocw.mit.edu/NR/rdonlyres/Sloan-School-of-Management/15-010Fall-2004/49244E1B</a> 6EF6-4419-A260-A8DF2B788D5F/0/beer\_gm\_col\_cart.pdf>

<sup>5</sup>Levenstein, Margaret C. Suslow, Valerie Y. What Determines Cartel Success? January 21, 2002. <a href="http://www.umass.edu/economics/publications/econ2002\_01.pdf">http://www.umass.edu/economics/publications/econ2002\_01.pdf</a>

<sup>6</sup>Monopoly Equilibrium PinkMonkey.com- Economics Study Guide – 11.3 Monopoly Equilibrium. 28<sup>th</sup> March 2007.

<a href="http://www.pinkmonkey.com/studyguides/subjects/eco/chap11/e1111301.asp">http://www.pinkmonkey.com/studyguides/subjects/eco/chap11/e1111301.asp</a>

<sup>7</sup>Kelliher, Muireann A. <u>Diamonds Are Forever: An Econometric Investigation</u>. March 30<sup>th</sup> 2007. <a href="http://www.tcd.ie/Economics/SER/sql/download.php?key=152">http://www.tcd.ie/Economics/SER/sql/download.php?key=152>

<sup>8</sup>Kretschmer, Tobias. <u>De Beers and Beyond: The History of the International Diamond Cartel</u>. London Business School. 1998

<sup>9</sup>Chang, So-Young. Heron, Amanda, Kwon, John. Maxwell, Geoff. Rocca, Lodovico. Tarajano, Orestes. <u>The Global Diamond Industry.</u> Columbia University. 2002.

<sup>10</sup>Veblen, Thorstein. <u>Conspicuous Consumption</u>. The Theory of the Leisure Class: An Economic Study of Institutions (New York: Macmillan, 1902), Pg 68-101.

<sup>11</sup> Epstein, Jay Edward. <u>Have You Ever Tried To Sell A Diamond?</u> The Atlantic Monthly. Feb. 1982. <a href="http://www.theatlantic.com/doc/198202/diamond">http://www.theatlantic.com/doc/198202/diamond</a>>

<sup>12</sup><u>De Beers: Diamond Trading Company (DTC).</u> April 5<sup>th</sup> 2007. <a href="http://www.De">http://www.De</a> Beersgroup.com/debee rsweb/About+De+Beers/De+Beers+World+Wide/Diamond+Trading+Company+(Dtc)/>

<sup>13</sup>Diamond Industry Annual Review 2004: Republic of Angola. Sum Incorporated. April 5, 2007. <a href="http://www.tacyltd.com/Files/angola">http://www.tacyltd.com/Files/angola</a> e.pdf>

<sup>14</sup>An Industry once dominated by a cartel is starting to look like any other. The Economist. Feb.22<sup>nd</sup> 2007. Johannesburg. < http://econ.ucsc.edu/faculty/dan/101/ De Beers.pdf>

<sup>15</sup>The De Beers Cartel: Smaller But Not Weaker. April 5, 2007

<a href="http://www.diamondregistry.com/">http://www.diamondregistry.com/</a> De Beers.htm>

<sup>16</sup>Bah, Ibrahima. Bhardwaj, Prateek. Fitzgerald, Brian. Goldstein, Ben. <u>De Beers, South Africa & The Diamond Industry</u> Student Research Working Paper Series. June 2003 <a href="http://pages.stern.nyu.edu/~lwhite/f&m.assignments.2006/f&m.presentationmaterials/">http://pages.stern.nyu.edu/~lwhite/f&m.assignments.2006/f&m.presentationmaterials/</a> De Beers, 20South 20Africa 20& 20the.pdf>

<sup>17</sup> <u>The Cartel isn't for ever</u>. Johannesburg and Windhoek. The Economist print edition. 15<sup>th</sup> July 2004 <a href="http://www.economist.com/business/displayStory.cfm?story\_id=2921462">http://www.economist.com/business/displayStory.cfm?story\_id=2921462</a>

<sup>18</sup>Goldman, Lea. Berman, Phyllis. <u>Cracked De Beers</u>. Forbes.com 15<sup>th</sup> September, 2003. <a href="http://members.forbes.com/global/2003/0915/046.html">http://members.forbes.com/global/2003/0915/046.html</a>

<sup>19</sup>Farer, David. <u>Close-Up on Lev Leviev, Master Diamond Dealer</u>. 16<sup>th</sup> January, 2005.<a href="http://davidfarer.com/?page=3&id=35">http://davidfarer.com/?page=3&id=35</a>

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<sup>2004. &</sup>lt; http://pages.stern.nyu.edu/~rwiner/De%20Beers%20case.doc>