Will Natural Diamonds Last Forever?

How is the De Beers empire facing the competition from synthetic diamonds?
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INTRODUCTION

The first image of diamonds that comes into our minds is generally characterized by the brightness and the eternal lifespan of this stone. This representation is due to its strength: according to Friedrich Mohs’s scale, which measures mineral hardness, only the diamond is classified 10, the hardest level. The diamond is pure crystalized carbon. Most diamonds are believed to be formed 2-3 million years ago. Even their name reflects rigidity, with “adamas” in Greek, meaning “indestructible” or “adamant” in English meaning inflexible.

The diamond symbolizes wealth, power and eternal love. This concept was invented by one man, named Cecil Rhodes, the founder of the company De Beers. His aim was simple: establish a real legend that diamonds are forever and scarce in order to control diamond supply and thus, market prices. His strategy, continued by his successors, was successful for over a century. Until the 1990s, the diamond miner company had been a giant cartel, and its market seemed inexorable. But unlike diamonds, strategy, politics and economic trends are not forever. Several factors, including geological discoveries or new competition, have transformed the world’s biggest diamond miner into a player among others.

One of the biggest challenges the traditional diamond industry has to face is the increasing interest in synthetic diamonds, also called laboratory-grown diamonds. But what does “synthetic diamond” exactly mean? Whereas natural diamonds are formed under very particular circumstances, deep down in the Earth’s mantle, synthetic diamonds are created in laboratories. The manufacturing process only needs one hour for small-sized diamonds and 8 days for gem-quality diamonds. The first synthetic diamond is believed to be invented by General Electrics in 1954.

Their chemical composition is strictly similar to natural diamonds, making them very
difficult even for experts to distinguish them from natural diamonds. According to a report
carried out by Bain, the consulting firm, more than 95% of synthetic diamonds are used for
industrial purposes today. But technology has improved to an extent that even gem-quality
synthetic diamonds can be produced.

Therefore, is it plausible that, in a near future, lab-grown diamonds become a real
substitute to natural diamonds? Do they constitute a serious threat to the traditional
diamond industry, considering their relatively lower price and the overall depletion of
resources?

And most of all, how is De Beers facing the threat of lab-grown diamonds?

In order to understand the decisions taken by De Beers these last years, the first part
of this research focuses on the history and the background of the company. Then the stakes
embodied by lab-grown diamonds will be explained in the second part, as well as the
measures taken by De Beers to counter this new competition. Finally, the future of the
diamond industry, according to several estimates, will be studied in the third part.

Nowadays environment issues have become central in our lives and we constantly
question our way of consumption. Is being “green” the new glamour? Would you purchase
a jewel encrusted of ethical synthetic diamonds to be trendy and environment-friendly?
Considering De Beers is unquestionably the most traditional player in the diamond industry,
do you think the company will jump on the bandwagon and develop its own diamonds?

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PART I. THE PROGRESSIVE DOWNFALL OF ONE OF THE MOST POWERFUL MONOPOLIES IN THE WORLD

I.1. The era of Cecil Rhodes and Ernest Oppenheimer: a century of supremacy

a. The establishment of De Beers

The famous diamond miner De Beers was established by the British businessman Cecil Rhodes, in South Africa. In 1869, when a diamond was discovered near the Orange River, many people wanted to make their fortune and thus, began to dig into the soil hoping to find diamonds. Under this diamond rush, Cecil Rhodes progressively invested and bought out small mining companies to build his empire.\(^5\) It was named after the De Beer brothers, who were former owners of a farm where many diamonds were extracted. They chose to sell their farm quickly, and their name became associated with the company.

With no upstream competition, Cecil Rhodes, helped by the British government, could hold sway the diamond production, supply and even demand. No matter what the amount of production was (1,314,000 carats in 1874 to 3,842,000 en 1888), De Beers could maintain the highest price for its diamonds. Cecil Rhodes negotiated an agreement with the Diamond Syndicate, based in London, to become the only diamond supplier in the world.

This domination was certainly emphasized by the colonization of Africa. Cecil Rhodes advocated British imperialism, and his objective (as well as the British South Africa Company’s) was to have a stranglehold on the area stretching between Limpopo to the Zambezi river. He was even given the authority of these lands by Queen Victoria. By negotiations or by force, he eventually had these lands in his grasp. At his death at the end of the century, De Beers owned 95% of diamond production in the world, backed by London’s banks.\(^6\)

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The American journalist Edward Jay Epstein wrote in his book *Have you ever tried to sell a diamond?*, 2011, that in order to control production and to bolster the illusion of diamonds’ scarcity, the main investors had to join their interests to create a single entity. Therefore, they created in 1888 De Beers Consolidated Mines, Ltd.\(^7\)

b. The strategy of “De Beers way or the highway”

The only way to increase the diamonds’ value was to make them rare, meaning the production must be reduced. Another entrepreneur, Ernest Oppenheimer, created the Consolidated Diamond Mines (CDM) and after the demise of Cecil Rhodes, bought out many De Beers’ shares. The company eventually agreed to give to Oppenheimer a large amount of its shares in exchange of the ownership of the CDM. In 1929, Ernest Oppenheimer was the new chairman of De Beers.

However, the 1929 crisis did not spare the diamond market and sales plummeted. In 1930 De Beers created the Diamond Trading Company (DTC) in order to collect the whole supply of rough diamond. The DTC’s role was simply to decide how many diamonds would be sold, and to whom. Bringing its entire production to the DTC, De Beers also tried to buy all the diamonds they could find outside the monopoly, and send them to London.

They managed to create a certain form of “scarcity”, which we can actually call an intentional shortage. What was unsold was stockpiled: by buying out mines, and closing them, even at miners’ expenses, De Beers locked down the production amount. Within 3 years, from 1930 to 1933, the diamond production dropped from 2,242,000 carats to 14,000 carats. Only the most efficient mines continued to produce diamonds. This decision led to many conflicts between the company and local governments, which accused De Beers and especially the DTC of having too much power in this sector, especially as the diamond industry is particularly vital for their economy. As a result, the diamond stockpiles got even bigger and in 1937, 40 million carats were stored, including very little gems, called “borts”.\(^8\)

\(^7\) EPSTEIN, Edward, Jay, *Have You Ever Tried to Sell a Diamond?*, EJE Publications Ltd, 2011.

The geographer Roger Brunet, in his book *Le diamant, un monde en révolution*, explains De Beers’ control over diamonds as “la stratégie du robinet” (the “tap strategy”). This strategy, better known in English as “the De Beers way or the highway”\(^9\), consisted in limiting the production of diamonds, to stock all of them and control the demand and prices. When the market was weak, the company would restrain diamond supply to stabilize prices, and when there was a strong demand, De Beers would release some supply from its inventory to control prices.\(^{10}\)

De Beers ultimately succeeded in attracting all the diamonds to its magnet, including small diamond productions. Ernest Oppenheimer, even under the 1930 economic crisis, was able to make De Beers the only supplier for diamond merchants and to decide the amount of supply, or the “tap’s diamond flow”. The DTC could at that time choose which amount, at what price and to whom it could sell its diamonds. The company organized every year a “sight” where chosen clients called “sightholders” were attributed a particular amount of diamonds in a box. These “happy few” were relatively honored to be chosen, because it meant they had a certain status, a certain success recognized by De Beers. But on the other hand, they had no say in this system: nobody knew how many diamonds the other competitors received in their boxes and they could not exchange anything, nor bargain the price. There was no negotiation at all. Moreover, they were forbidden to resell their rough diamonds and the only thing that they could do was to polish them and create jewelry.\(^{11}\)

If the De Beers’s sightholders could not resell their rough diamonds, in order to control price and demand, the company also wanted the final customers to believe that their purchased diamond could not be resold, that they were too precious and valuable to be sold to someone else.

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\(^9\) From Rock to Ring - De Beers’ Diamond Cartel Shifts from Managing Supply to Driving Demand

\(^{10}\) ZIMNISKY, Paul, « A Brief History of De Beers », 2019, http://www.paulzimnisky.com/a-brief-history-of-de-beers

c. How did De Beers manage to associate its diamonds with the word “forever”?

The journalist Edward Jay Epstein wrote:

*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. (...) To stabilize the market, De Beers had to endow 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. Moreover, the vision in Europe that diamonds were considered as jewels for aristocrats bolstered De Beers’s ambitions.*

Powerful values shared all around the world were encrusted in “diamonds’ dream”, to make these shiny stones even more desirable — and temendously costly. By using consumers’ feelings and admiration for diamonds, De Beers made sure to protect themselves from any competition. They made consumers believe that they would lose money if they sold their diamonds, and they had better to keep them in their jewelry box.

But the economic crisis in 1930 still had a serious impact on diamonds sales, and halved in a few years. On the eve of World War II, Europe was no longer a profitable market and in 1938, nearly 75% of the monopoly’s diamonds were sold in the United States, particularly with engagement rings. In fact, Oppenheimer and the bankers thought that it was a perfect time to invest in a huge advertising campaign to persuade the Americans to buy more engagement rings, more expensive diamonds. ¹¹ They hoped not only to attract more customers but also to make the whole population strongly believe that diamonds are the most precious thing in the world. They inspired people to believe that the best (and only) way to declare one’s everlasting love, was to offer a diamond engagement ring, because nothing could break it.

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Thus was launched one of the most iconic advertising campaigns of all time. N.W. Ayer, the advertising agency in charge of the marketing campaign, invented in 1947 the slogan “A Diamond is Forever”. This campaign was so successful that even today we still associate “diamond” with the adjective “forever”. Roger Brunet said in his book that “forever” meant the diamond ring was eternal not only for the one who receives the ring, but also for the one who offers the ring. Thanks to their campaign, an Ayer study revealed that the sales of diamonds increased by 55% in the US from 1938 to 1941.

To keep the fantasy embodied by diamonds alive, De Beers had to invest in many forms of media. TV, movies, magazines... the advertising for diamonds was found everywhere. Countless actresses and models wore diamonds to show to the world their beauty. Even the British royal family accepted to be photographed with diamonds. Queen Elizabeth II agreed to wear jewelry incrusted with diamonds in front of cameras. In fact, it was essential to maintain the dream, because without any dream, people would not purchase diamonds for such a high price.

Unfortunately for De Beers, even their advertising campaign was not strong enough to last for eternity. The diamond industry analyst Paul Zimnisky observed that “by the end of the century, De Beers’s market share had fallen from as high as 90% to less than 60%” and in 2008, De Beers ended its famous “A Diamond is Forever” campaign.

So what happened to their monopoly? Did they fail to anticipate the changes of the industry? Or was it because their domination weighed down too much on their sightholders?

Many separate events were out of De Beers’s control and one after another, weakened the empire.

I.2. New players and events that weakened the empire

By the 1990s, because of several major events, De Beers had lost its global status as a monopoly in the diamond industry, and the company’s traditional business model needed a revamp.16

a. Russia’s kimberlite sources

The first event that marked the fall of De Beers was the discovery of new kimberlite sources in Russia. The kimberlite pipes are volcanic rocks where diamonds are formed. Staline’s government is believed to have invested in research to find natural diamonds and the first pipes were found in 1955 (R. Brunet, 2003). From 1956, more than 500 pipes were reported to be discovered. Among them, one of the biggest is the Mirny mine. The USSR started to produce its own rough diamonds. However, believing that competition would be unfavorable for both De Beers and Russia, the Soviets concluded an agreement with the company. They would sell their production through “a single channel” to the DTC to control the diamond global supply. What De Beers did not anticipate is that the Soviets succeeded nevertheless in concluding other contracts elsewhere, selling their diamonds at a cheaper price to Israel or Anvers.17

The consulting firm Bain carried out a report in 2011 to analyze the diamond market and De Beers’ background. According to this report, by the 1970s, Russia had become the world’s 3rd largest diamond producer by volume. Today, Alrosa is the first diamond producer by volume in the world. The discovery of kimberlite pipes increased the overall supply of rough diamonds. In the 1990s, Russia’s major producers began to leave the DTC and started to sell their own diamonds on the global market.18

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b. Issues linked with diamond trafficking and the emergence of new competitors

The second event that disrupted De Beers’s supremacy is the decolonization during the 1960s of several African countries, including Congo and Sierra Leone. Ernest Oppenheimer held sway a huge part of the African continent during the 1930s, but the decolonization weakened the monopoly. The situation for the company became even worse because of civil wars and especially because of diamond trafficking. Diamonds were illegally traded to fund weapons and thus were named “blood diamonds”, especially the diamonds of Angola, where the economy and most mines were devastated. The “blood diamonds”, which had a huge media coverage, definitely stained the company’s reputation. The glamor of diamonds was replaced by the horror of war. The government of Angola refused to continue to work with De Beers, and preferred to collaborate with its competitors: Alrosa and the Israeli businessman Leviev.

De Beers lost a substantial part of its mines and was deeply offended by Angola’s government (R. Brunet, 2003). The company immediately boycotted Angola’s diamonds and wanted to leave the scandal behind. The company, closely linked with blood diamonds, received scathing criticism, and had to take action in order to survive. The Clean Diamond Act was voted in 2001 in the Unites States to impose the suppliers to only purchase the diamonds that have a certified production location. It was in De Beers’s interest to comply with the law: with a favorable coverage from the press, the company aimed to restore its image by convincing customers of its “clean diamonds”. But the result was disappointing and far from their expectations. Thus, the situation in some African countries did not improve.19

After Russia, geologists discovered kimberlite pipes in Australia, precisely near Lake Argyle, in the north of Western Australia. It was a major discovery: in the late 1970s, the mines discovered in the Argyle region could produce up to 50 million carats a year by Rio Tinto, a large mining company. It was more than the whole production of De Beers in 1981 and these new mines slipped from De Beers’s grasp.20 Many kimberlite pipes were also discovered in Canada by the company Ashton.

Botswana was one of the only countries where De Beers could control and continue its diamond production. Today, De Beers is still the first company to produce diamonds in terms of value, but not in volume anymore. A considerable part of Botswana’s exports today is still allotted to its diamonds.\footnote{ATLAS OF ECONOMIC COMPLEXITY, Botswana, \url{http://atlas.cid.harvard.edu/explore?country=37&product=undefined&year=2017&productClass=HS&target=Product&partner=undefined&startYear=undefined} [Dec. 2019]} However, today there are still issues concerning the share earned by De Beers on Botswana diamonds (around \(\frac{3}{4}\)) and the government leaders want to renegotiate with the company.\footnote{COTTERILL, Joseph, “Botswana presidential hopeful vows to take tough line on De Beers”, Financial Times, October 23\textsuperscript{rd}, 2019, \url{https://www.ft.com/content/331e0600-f414-11e9-a79e-bc9acae2b654} [Dec. 2019]}

\textit{c. Lev Leviev, “the King of Diamonds”}

The last major competitor of De Beers is an Israeli businessman, Lev Leviev, who is also called “the King of Diamonds”\footnote{Forbes, “Lev Leviev”, \url{https://www.forbes.com/profile/lev-leviev/} [March 2020]}. Tel Aviv became the new center for polished diamonds and is the world’s second largest diamond market after London-Anvers, including a leading diamond stock market. The Israel Diamond Institute also has a significant influence and as result, companies do not need either De Beers or the DTC. Lev Leviev was born in Russia and emigrated with his family to Israel. He worked in a stonecutter workshop and founded afterwards his own workshop. Facing difficulties to obtain diamonds, he decided to build his own monopole. He founded the LLD (Lev Leviev Diamonds), which has subsidiaries in many countries. Thanks to his strategic relationships with Russia, his company developed at a fast pace and in 2000, its turnover exceeded $1 billion for rough diamonds and $2 billion for the polished diamonds (R. Brunet, 2003).

Leviev owns the biggest jewelry store in Moscow, stonecutter workshops in Armenia and in Ukraine, India and China... He also has the monopole in Kazakhstan, where soil is rich in minerals and hydrocarbon.\footnote{BRUNET, Roger, \textit{Le diamant, un monde en révolution}, Paris, Belin, 2003. [Oct. 2019] p.109 to 112}

Whereas De Beers focused on the production and the distribution of diamonds, Leviev’s strategy was to invest in the two other activities neglected by its rival: the purchase...
and the cutting of rough diamonds. Leviev was even chosen by the DTC to be a sightholder, but his own empire started to be too powerful and he dared to refuse the DTC to buy its sightholder box ...

d. First part conclusion

In his book, Roger Brunet estimates that De Beers, formerly the only single diamond purveyor, henceforth supplied only one third of rough diamonds imported by Tel Aviv. But still, De Beers controls today 40% of the rough diamond market. 

In order to differentiate themselves and boost their growth, De Beers took many drastic measures, suggested at that time by the consulting firm Bain. They gave up their role of “Randlord”, — a word used to describe rich South African miners, to revamp their name alongside with luxury brands, and decided to create and sell high jewelry. With its partnership with LVMH, De Beers successfully entered the retail sector, becoming a direct competitor with its former clients, such as Tiffany & Co., Cartier, Richemont, Bulgari... and thereby was not well welcomed.

To conclude, all these events permanently destroyed the monopoly created by Cecil Rhodes and Ernest Oppenheimer. The market environment constantly evolves through time, and the principles advocated by the two chairmen are not well founded anymore. The profession has changed significantly, and so have the customers. The “De Beers way or highway” is now behind them and the company needs to rethink its marketing strategy. The campaign “A Diamond is Forever” was immensely successful in 1947, but today De Beers needs a new campaign as ingenious as this one.

Besides many competitors including Alrosa, Leviev, Rio Tinto, De Beers has to face another kind of competition. In fact, the whole traditional diamond industry observes the looming specter of an unprecedented type of diamond: man-made diamonds. Why are these lab-grown diamonds so different and to what extent do they jeopardize the traditional diamond market?

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26 see appendix 1. p. I
PART II. SYNTHETIC VS NATURAL DIAMONDS: A LONG-TERM STRATEGY FOR DE BEERS?

When women begin reading about a diamond crash, they will take their diamonds to retail jewelers to be appraised and find out that they are worth less than they paid for them. At that point, people will realize that diamonds are not forever, and jewelers will be flooded with customers trying to sell, not buy, diamonds. That will be the end of the diamond business. (Epstein, 2011) ²⁷

These sentences highlight the fact that any disruption, any crisis can turn the diamond industry upside down and thus, the market is very sensitive to any breakthrough. In 1954, the first synthetic diamond was created. This technological feat did not impress De Beers at first, which looked down this man-made stone transformed into diamond. And for years, the company vowed it wouldn’t touch any of these stones created in laboratories.²⁸

But, because both lab-grown and natural diamonds have the same geochemical structure, it is impossible to differentiate them with the naked eye. Thus, this new generation of diamonds is challenging De Beers’ domination. In order to identify them, De Beers launched DiamondView and DiamondSure, which are instruments used by retailers and manufacturers to examine the origin of their diamonds.²⁹

So to what extent do synthetic diamonds represent a threat to De Beers? What are the main advantages that differentiate them from natural diamonds?

II.1. The competition of lab-grown diamond companies

a. The main advantages of producing laboratory diamonds

As Russia and especially China have become large exporters of synthetic diamonds, their production today is colossal. Nowadays about 95% of diamonds used for industrial purposes are synthetic, and a sizable amount is produced in China. The technological improvements have made the laboratory diamond market more competitive than ever. A synthetic diamond used to be very expensive to produce, because manufacturing costs were even more costly than extracting natural diamonds from the soil. Today it costs between $300 to $500 per carat to produce a lab-grown diamond, against $4,000 per carat in 2008. Moreover, the cutting machines are so precise that they easily sculpt gem-quality diamonds, suitable for jewelry and even high-jewelry. Many independent firms produce synthetic diamonds, such as Gemesis or Lucent, the latter renowned for its Ultimate Created Fancy diamonds. These synthetic diamonds are 5 to 10 times less expensive than natural diamonds and have a comparable quality (Brunet, 2003). Over the past few years, the biggest synthetic diamond companies have been receiving investments from Hollywood stars such as Leonardo DiCaprio. The actor starred in Blood Diamond, a movie that criticizes the harmful effect and the role of the mining companies on the Sierra Leone civil war.

So what are precisely the reasons of this enthusiasm about lab-grown diamonds? Laura Chavez, the founder of the lab-grown jeweler Lark & Berry is an advocate of synthetics. She explains that they are an “eco-friendly, conflict-free alternative to natural diamonds”, and denounces traditional companies for exploiting local workers and violating human rights. A major turning point for the credibility of lab-grown diamonds was when the British

royal family accepted to wear their diamonds. The Duchess of Sussex, Meghan Markle, made an appearance wearing Kimai’s synthetic diamonds, which was a huge victory for the man-made diamond producers.

The main advantage offered by lab-grown diamonds is their affordable price. They are cheaper than natural diamonds, so customers have the opportunity to buy a larger diamond for the same price. According to the consulting firm Bain’s 2018 report on the diamond industry, the drop of production costs have led to a decrease in lab-grown diamonds’ retail prices, which halved in the past two years, and wholesale prices shrank threefold. It is estimated that the lab-grown diamond market might grow to around 10 million to 17 million carats by 2030, but customers’ perception of lab-grown diamonds is still blurry. Analysts are not sure whether customers will really differentiate lab-grown and natural diamonds and the size of lab-grown market is not clear yet.

Jewelers and intermediaries may find the low-cost production of synthetic diamonds attractive, because they can earn a higher margin. An increasing number of De Beers’ sightholders have consequently started to trade with lab-grown diamond companies. Russel Mehta, the managing director of Indian-Belgian diamond manufacturer Rosy Blue, which is a De Beers’ sightholder, said “margins [on synthetics] are better than natural diamonds currently... In the current natural-diamond environment, we’re losing money on every single rough-diamond purchase we make from primary sources”.

Bruce Cleaver, the CEO of De Beers Group, revealed that according to the company’s own analysis on synthetic diamond wholesale prices, prices dropped by 60% during the six months preceding March 2019. Current margins are “unsustainable”, due to the pace of technology and the increase in volume. In addition, he pointed out the presumable future decline of natural diamonds’ supply, given that many existing mines are approaching the

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36 see appendix 2. p. II  
“end of life”. The world’s major producer of natural pink diamonds, Rio Tinto’s Argyle Mine in Australia, is notably about to close in 2020, reducing the supply by 90 to 95%.

China has developed a very sophisticated technology to create lab-grown diamonds and has become today’s largest producer of gem-quality synthetic diamonds - 56% of the world production, according to the analyst Paul Zimnisky.

b. Tensions between natural and synthetic diamond companies

The growth of lab-grown diamonds has certainly led to substantial losses for major traditional diamond producers, including Alrosa or De Beers, which banned the terms “natural”, “real”, “cultured” from being used to describe synthetic diamonds. This competition divides two sides in the diamond industry: the advocates of earth gems and the advocates of lab-grown gems, and the two parties regularly vehemently criticize each other.

On one side, natural diamond producers are accused by lab-grown diamond companies for harming the environment. They emphasize the fact that their diamonds are “exactly the same as the natural ones”, without violating human rights. Veeral Rathod, the CEO of the Canadian company Spence Diamonds, recently said that 80% of their customers would rather choose lab-grown diamonds because they are “more ethical than natural diamonds”. He said, “though we also offer ethically sourced, conflict-free earth-mined diamonds, we want to educate everyone about this alternative because we believe lab-grown diamonds are the future of the industry.”

However, the US Federal Trade Commission (FTC) warned some lab-grown diamond manufacturers of their unsubstantiated eco-friendly marketing claims. The Diamond Producers Association published an independent report carried out by Trucost that determines the socio-economic impacts of natural diamonds. And according to this report, a mined diamond produces 69% less carbon emission per carat than a synthetic diamond. The frictions between the two parties are such that in May 2019, the members of RapNet,

the world’s largest diamond trading platform, voted to ban synthetic diamonds. The parent company Rapaport also offered a price list for stones, excluding the man-made diamonds. In response to this, the companies launched the Lab-Grown Diamond Exchange and Price Index.  

Martin Rapaport, the founder of the RapNet online diamond trading network and the chairman of Rapaport Diamond Group said:

*Synthetics are parasites living off the marketing message that naturally scarce diamonds are the ultimate gift of love and commitment. Synthetics are trying to steal the ‘Diamond Dream’. They don’t have their own message.*

He criticizes and disapproves the fact that synthetics are more ethical because “they do not contribute to sustainable economic development in developing countries”. Moreover, he thinks that synthetics are not the same as earth diamonds because they can be produced in an unlimited quantity, and thus they do not hold any value: “natural diamonds’ prices are based on scarcity and that is why their price per carat increases with size and quality. The scarcer something is, the more valuable it is.” Indeed, diamonds’ rarity and quality are measured according to the industry’s standards, often called “4Cs” (Cut, Color, Clarity and Carat weight).  

Consequently, it is extremely risky to speculate on the future value of lab-grown diamonds. Do they offer a buy-back guarantee? If so, what would be the trade-in value? The president of Natural Color Diamond Association Alan Bronstrein describes another difference between natural and lab-grown diamonds that may justify their value: natural diamonds have natural colors, and it is impossible to get two gems that are exactly alike. They are unique and have, according to him “individual personalities, like people”. Therefore, man-made diamonds are totally different because they look precisely identical. Alan Bronstrein said “When I look at the variety of expressions of natural color diamonds,

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it appears to be infinite, like the trillions of stars in the sky. We are made of the same stardust.”⁴³, meaning that earth diamonds will always differentiate themselves from synthetic diamonds for their color and gem uniqueness, and hence have a certain “natural benefit” that artificial gems will never have.

The lab-grown diamond producers are tapping in the fashion jewelry niche market, but feel confident in conquering the engagement and bridal sectors, which is very profitable. Perhaps a successful marketing campaign can switch the opinion of future married couples, as “a Diamond is Forever” once did. Nevertheless, according to a MVI consumer survey conducted in July 2019, respondents were still more likely to purchase lab-grown diamonds as fashion jewelry rather than for engagement or wedding rings.⁴⁴

Within this complex environment, what are the decisions taken by De Beers regarding the increasing awareness of synthetic diamonds? Do they take this technology as a threat or as an opportunity to jumpstart their growth?

II.2. De Beers’ Lightbox

a. A fashion jewelry brand

In September 2018, De Beers Group startled the whole diamond industry by launching Lightbox Jewelry, a lab-grown fashion jewelry retailer. Considering their aversion for man-made diamonds, which lasted for a very long time, it is indeed surprising of De Beers to break into this new market. Bruce Cleaver said:

*Lightbox will transform the lab-grown diamond sector by offering consumers a lab-grown product they have told us they want but aren’t getting: affordable fashion jewelry that may not be forever, but is perfect for right now*.46

So in light of what M. Rapaport said about synthetic diamonds’ value, is it actually too risky for De Beers to launch a lab-grown brand? Won’t their customers think that the company is less valuable than before?

This is actually not the first time that De Beers has undertaken synthetic diamond activities. Their subsidiary Element Six is a dominant player in the diamond industry and is specialized in producing industrial synthetic diamonds. Known for their hardness, diamonds are also very suitable for industrial purposes. Until recently, De Beers wanted to limit its synthetic diamond activities only to the industrial diamond market, with its subsidiary Element Six. But the increasing enthusiasm for synthetic diamond jewelry made De Beers do a U-turn and the company launched in 2018 its own synthetic diamonds.47

Lightbox’s diamonds are manufactured by Element Six. The company targets younger customers and people who are reluctant to spend on expensive jewelry. Lightbox sells its diamonds $800 per carat. The firm’s new strategy is to undercut its competitors producing synthetic diamonds.46 De Beers attempts to separate the diamond market in two: the segment of luxury and engagement rings with mined diamonds and the segment of

45 see appendix 3. p. III
fashion, young millennials at the bottom. De Beers tries to eliminate the synthetic diamond threat by convincing customers that lab-grown diamonds are a completely different product.

However, the official reason of Lightbox’s launch is not to disrupt existing synthetic diamonds producers, but to “create a small, profitable business in its own right”. Bruce Cleaver still stays loyal to natural diamonds: “Lab-grown are not special, they’re not real, they’re not unique. You can make exactly the same one again and again.”

Bruce Cleaver describes lab-grown diamonds as a “fun, pretty product that shouldn’t cost that much”, emphasizing the fact that the lab-grown diamond business will be a small and independent part of their core business.

Lightbox’s jewelry can be purchased through its website. On October 2019, De Beers undertook a bricks-and-mortar strategy, opening stores at Bloomingdale’s and Reed Jewelers. This strategy will enable marketers to determine, in a traditional retail environment, whether there is a real demand for synthetic diamonds at $800 per carat, or not. Steve Coe, the CEO of Lightbox Jewelry said that the stores will help to better understand each segments’ expectations. The bricks-and-mortar experience and sales performance will reflect customers’ preferences and their purchasing process.

Sally Morrison, the chief marketing officer of Lightbox promotes a “quick”, “reliable” and “high-quality” production. Unlike its the competitors, Lightbox’s prices are based on production rather than deducted from the natural diamond curve. The company chose to color their laboratory diamonds in light blue or in light pink, because these colors, when they are found in nature, are extremely rare and expensive, adding value to their product.

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b. Lightbox Jewelry’s brand personality

If we take a glance at Lightbox Jewelry’s website, we can observe a sophisticated and competent brand personality. The sentence “We love science and sparkle” highlights the fact that the company is trendy and at the state of the art in producing lab-grown diamonds. In the About Us page, the company targets younger, fashionable customers, so young models are chosen to picture their page\textsuperscript{51}. Lightbox picked very modern colors: pastel blue, grey, pink.

Lightbox’s mission statement page might be inspired by Instagram, with numerous pictures and a concise writing style. The video attached “The Science Behind the Sparkle of Lab-grown Diamonds” explains the history and the process of manufacturing man-made diamonds. The company emphasizes its know-how “behind that sparkle, there is a lot of real ground-breaking science (...) They have spent the last 30 years perfecting the process to grow the highest-quality stones”.\textsuperscript{52}

Nonetheless, it appears that the Lightbox website does not mention its parent company at all. The name of De Beers cannot be found anywhere on the website. Perhaps it means that even though Lightbox is its subsidiary, De Beers does not want to be directly associated with this brand. It seems that the group does not want to take the risk to be linked with synthetic diamonds and aims at maintaining their prestigious brand name while tapping into a new market. So their strategy is to break into this promising market while keeping their prestigious image of high-end jewelry. They clearly separate themselves from Lightbox. Lightbox’s jewelry has to be displayed separately from natural diamonds and clearly branded as synthetic (Demarco, Forbes, 2019).

The subsidiary is not a luxury brand, but a “laboratory-grown diamond fashion jewelry brand”\textsuperscript{53}, that offers “affordable diamonds”. De Beers’ strategy may be at some point slightly paradoxical, because their erstwhile policy was to fix diamond prices as high as possible, and the company was the only reason for such expensive prices...

\textsuperscript{51} see appendix 2, p. II
c. Millennials: a growing interest in lab grown diamonds

As the market for man-made diamonds is expected to exceed $3 billion at the end of 2019, up from $2 billion in 2018 according to the analyst Paul Zimnisky, De Beers’ campaign “Real is rare” in 2018 did not seem to be successful. In order to hamper competition and keep a major role in the diamond market, it was essential for De Beers to adapt, without completely changing the core of their brand.

MVI Marketing Consumer Research Studies conducted a survey in fall 2018 about the consumer awareness of synthetic diamonds. 51% of adult US consumers declared to be aware of lab-grown diamonds, particularly through social media and jewelry retailers. Among these consumers, the millennials are the most aware of these diamonds. 66% of American adults would consider to buy lab-grown diamonds for engagement rings and 23% would definitely buy. The investment bank Citi projects lab-grown diamond market share to grow to 10% by 2030.54

Whether De Beers admits it or not, the growth of man-made diamonds is booming, and today’s market is in favor of an eco-friendly consumption. The investment bank Morgan Stanley’s concluded in its report “A Game of Stones” that today, many consumers are willing to pay a premium price to have a low environmental impact consumption and be eco-responsible.55

PART III. DE BEERS AND THE FUTURE OF THE DIAMOND INDUSTRY

III. 1. De Beers’ situation in the diamond industry today

Due to its 131-year-history, De Beers has accumulated numerous precious assets that its competitors do not have. The company is still a major player in the industry, and is the n°1 in producing mined diamonds in terms of value. But the firm has many weaknesses threatening its growth. The SWOT analysis builds a comprehensive approach and compares the position of a company with its competitors. David W. Conklin and Danielle Cadieu carried out in 2018 a case study about De Beers and the diamond industry.

De Beers has many assets and strengths. Its capabilities and resources can ensure a sustainable competitive advantage, in terms of human and financial resources as well as physical resources such as land and buildings. Its past experiences and successes are also a valuable asset. Their balance sheet and financial statement are healthy and can help to invest in new projects to diversify more and get additional revenue. Their product portfolio is still diverse, from producing and selling rough diamonds to creating high jewelry (and more recently, creating lab-grown diamond jewelry).

Their products and services have a superior quality, which enables their current customers to stay extremely loyal, and so De Beers can expand its market share. With their “Supplier of Choice” program, De Beers’ relationship with its suppliers is relatively strong, even if many suppliers try to increase their margin with the synthetic diamond market. Another advantage is that the industry has high barriers of entry for rough diamonds producers: the top 5 players, including De Beers, control 70% of the production (Bain 2018 report). Finally, De Beers have invested in R&D to stay at the cutting edge of technology, and possesses intellectual property rights.56

De Beers’ weaknesses are found in its poor level in Public Relations and organization culture. Even though the company is investing a lot in R&D, critical talents are lacking to adapt in a more appropriate way to the digital transformation. In addition, their actions to

reduce their environmental carbon footprint have not yet been successful. They need to develop better solutions to limit their impact on the planet, and play this “green” trump card to attract customers, particularly the Millennials. The growing market size and the evolving preferences of customers are substantial opportunities for De Beers. With an increase in wealth for Chinese middle class customers, the market size is growing at a brisk pace. De Beers needs to maintain its loyal customers and harness new ways of communication to directly reach its target segments, such as e-commerce, social media, AI...

Selling highly expensive diamond jewelry through e-commerce may be challenging but it is a very good opportunity for the company, as Chinese customers favor this way of purchasing. Lightbox Jewelry also sells its diamonds through the Internet. Geo-political factors such as protectionism, foreign exchange crises, etc. as well as environmental and governmental regulations are the biggest threats for De Beers. The company operates in an environment where it faces many regulations. The Botswana government, for instance, wants to renegotiate the company’s shares in the production of its diamonds. De Beers needs to build strong relationships with lobby groups and political networks. Another threat for De Beers is the increasing bargaining power of buyers, putting downward pressure on diamond prices.

De Beers financial results for 2019 confirm the above analysis, marking a challenging midstream trading environment. The consumer demand growth has dwindled, leading to a decrease in rough diamond prices and lower margins in the trading business. Therefore, De Beers’ total revenue decreased by 17% to $2.6 billion, compared with $3.2 billion in June 2018. Uncertainty over geopolitical tensions resulted in both retailers and midstream companies starting the year with higher than expected stock levels. Sales performance has been affected, particularly in high jewelry because of global trade tensions.

III. 2. New consumers, new challenges

A major challenge in the diamond industry is the shift in consumers’ preferences. Today’s customers are better informed and better educated than before. A simple marketing campaign is not enough to influence them. And the myth that diamonds have to be extremely expensive is outdated. People need certificates and proof that the quality of the diamond meets with the price paid. They do not want a simple diamond, they seek branding. As a result, Alrosa, the world’s largest producer of natural diamonds in terms of volume, flaunts the purity of its earth diamonds and more especially, their origin. “Provenance is our competitive advantage”, said Sergei Ivanov, the chief executive of Alrosa. Unlike De Beers, which chose to launch Lightbox, Alrosa decided to only produce natural diamonds, all the more since the Gemological Institute of America added in its 4C grading (color, clarity, cut and carats) another criterium, the country of origin.  

Eve Goldberg, who is one of the members running the William Goldberg jeweler company, notices that it is “less romantic” than before, customers used to buy a diamond because they loved it, now they are more concerned about the regulations and whether diamonds are worth their money. The jeweler William Goldberg said that jewelers really need to find ways to differentiate themselves from competition. As well, diamonds are not as scarce as producers want consumers to believe.  

De Beers’ diamond insight report found that the shifting consumer preferences is conveyed by a different conception of love and relationships for Millennials (born in the 80s) and Gen Z (born after 1995). The two generations are especially essential for the firm, because they are the two most populous generations today. Their purchasing power is rising, and they are important drivers in the luxury sector.  

So what are their characteristics and values? Millennials and Gen Z value authenticity and self-expression, they are digital-savvy and engaged in social issues.  

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60 Alrosa is betting on natural diamonds”, The Economist, September 12th, 2019,  
62 see appendix 4. p. IV  
63 DE BEERS GROUP, « 'The Diamond Insight Report 2018 »,  
64 see appendix 4. p. IV
is therefore critical to reach them. But late Millennials and Gen Z have different values compared with Gen X and early Millennials, and consequently, they have different marketing approaches. For instance, the Gen X requires an omnichannel distribution, whereas Gen Z consumers are keen on social media shopping.\textsuperscript{65}

Gen Z particularly holds De Beers’ attention, because they are the consumers of tomorrow. According to the marketers, they are more collaborative and global-minded. In marketing campaigns, the Gen Z especially thinks with “We”, and not “I”. Cause marketing is even more essential for them and ethics is one of their main purchasing criteria. If a product is not ethical, or is considered unethical, they will reject it. Businesses have to show them that they are responsible, and they share with them the ideal of making the world a better place. And because they are digital-savvy and even “digital-innate”, they are always online. Bruce Cleaver said “they buy what they want, when they want it” and this profoundly changes the typical decision-making and purchasing approach. Thus social media shopping and e-commerce play a crucial role. 80% of Gen Z say their bricks-and-mortar store purchases are influenced by social media.\textsuperscript{66}

De Beers Group found that in 2019 there was an increase in self-purchase diamond jewelry by younger women, especially by single women. After 2010, China started to have a strong desire for diamonds, and this surge in Chinese demand made diamond prices soar.\textsuperscript{67} Before 2010, diamond jewelry was not popular in China, and jade was by far preferred by Chinese customers. Today in China, almost half of all brides (47%) acquire diamond jewelry, compared with 70% in the mature US market.\textsuperscript{68} There is a huge potential for Chinese and Indian middle classes, but the US remains the dominant market for diamond jewelry. The purchase of diamonds for marriage purposes is still on-trend, but several new themes are


\textsuperscript{67} see appendix 5 p.V

relevant as well today to buy a diamond: inspiration, creation of meaningful moments, personal expression, etc.\(^69\)

The “Diamond Insight Report 2018” carried out by De Beers thoroughly examines today’s market expectations. However there is no word about their lab-grown diamond strategy. Perhaps their strategy is to avoid being cannibalized by lab-grown diamond competitors while keeping their image of distinguished natural diamonds. It seems that their key concern is to listen to customers’ needs and be more environment-friendly.

### III. 3. The impact of macroeconomic factors in the diamond industry

The future of the diamond industry is uncertain and full of complexities. With the unavoidable depletion of diamonds, the production from now on is expected to decline, despite the growing demand that will outpace supply. The probability to discover a new diamond deposit is quite low.\(^68\)

There is some uncertainty over consumer demand, caused by the 2000s and 2008 financial crises. As a result, uncertainty has brought down prices. So De Beers cut its production in half in 2019, in order to prevent excess supply, that may decrease even more diamond prices. Historically, De Beers used its diamond stockpiles to control the price volatility. But the company sold most of its supply from 2002 to 2007, and can no longer leverage this asset to control prices.\(^70\)

Despite uncertainty, consumer demand in 2019 is healthy, resulting from a strong US economy. Diamond jewelry sales grew 2% in US dollars in 2017, even though there is lower consumer confidence in Europe and Japan.\(^71\)

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So it is observed that Americans are buying more diamond jewelry than ever before. But prices for polished gems are plunging. The middle men who cut, polish and trade diamonds lost profits because of the devaluation of polished stones, and thus it gives retailers a huge buying power, intensified by tough competition. Anish Aggarwal, a partner at Gemdax, a specialist advisory firm, said that “De Beers’ fate is tied to polished prices”. It means that even if De Beers offered more flexibility around its clients’ purchases — its diamond prices were cut by 5% - , its sales have tumbled and the diamond crisis has deepened. 72

Geopolitical tensions have a substantial impact on the diamond industry. The China and US trade war have negative consequences, and have lead to a dwindling demand. In the “Integrated Annual Report 2018” of the group AngloAmerican, it is noticed that the diamond jewelry consumer demand is expected to decline because of multiple geopolitical tensions, including the risk brought by US-China tensions over trade, the Chinese government’s influence over economic growth and consumption and also because of exchange rate volatility. 73

To conclude, there are 3 major trends that will influence the diamond industry: the development and growing influence of new digital technologies, lab-grown diamonds and the generational shifts in consumer preferences.

As seen in part III.2, companies need to master social media to cleverly reach their customers. Many companies such as De Beers often post on Instagram their new collections, to increase awareness and boost social media shopping. Celebrity endorsement proves to be also very useful to this effect. Business models are redefined by digitalization, and digital-savvy customers are better informed than before, using offline as well as online channels.

In July 2018, the US Federal Trade Commission finally made a decision about the legitimacy of lab-grown diamonds. It amended and clarified that “a diamond is a diamond”, regardless of its origin. De Beers’ Lightbox uses a very precise pricing model, $800 per carat,

undercutting many competitors. The lab-grown diamond industry will evolve, and as barriers of entry are marginally high, lab-grown diamond players will multiply and synthetic diamond prices will decline. As a result, there is a real uncertainty about the value of lab-grown diamonds, that will likely decline over time.

In this morose and sluggish environment, mined diamond producers need to invest more on marketing. The campaign “Real is Rare” is not enough. Otherwise, they risk losing market shares to synthetic diamond producers.

Bruce Cleaver is particularly aware of the increasing importance of marketing over recent years. He said during the Condé Nast International Luxury Conference in Cape Town on April, 2019, that “because diamonds are forever”, the firm has the responsibility to create a sustainable environment and has invested in a project to create a reserve for animals, more precisely for elephants.

He added:

> There is no greater symbol of Africa than the majestic elephant. For us to be able to help secure their future in Mozambique, while also ensuring other species at our Venetia Limpopo Nature Reserve can flourish, is something every employee of De Beers Group is proud of.

This cause marketing strategy is a response to accusations by lab-grown diamond companies for damaging the environment. More importantly, the CEO’s message is a way to show to the Millennials, the biggest customer segment, that the company shares their own fundamental values. As De Beers values everlasting qualities, so do its policy regarding our planet need to be everlasting.

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75 MORGAN STANLEY Investment Bank, « Game of Stones: Disrupting the Diamond Trade »,
CONCLUSION

De Beers’ strategy to launch Lightbox is daring but brilliant. The company takes into account the shifts of the global market and tries to adapt to the constantly changing environment. The position it takes is dextrous: De Beers listens to the market trends by expanding its product line with lab-grown diamonds, without impacting its core activity. De Beers is attentive to maintain its high-end brand image and remains a stalwart in the diamond industry.

It is all the more essential for the firm to maintain its prestige, as the history of the company is full of famous but controversial events. From an absolute control of the diamond industry ruled by Cecil Rhodes to an abrupt deescalation during the 1990s, De Beers remains in our minds as the most famous diamond producer and has the intention to remain so.

Our society today has very distinct values that De Beers needs to target. In a ruthless market led by ever advanced technologies, the company always needs to use cutting-edge technologies to outsmart its competitors. De Beers has a strong branding, thanks to the company’s history: the company managed to withstand the numerous changes and has existed now for 132 years. However, their history is a double-edged sword: their link with the “Blood Diamonds” in Africa has not been forgotten nor their countless attempts to dispose of competitors. Furthermore, customers seek a low environmental impact consumption, and this might be their Achilles’ heel. Today De Beers really needs to find ways to develop their cause marketing strategy.

Yet, an alarming issue in the diamond industry is looming. The depletion of diamonds is undeniable. Time will tell how traditional diamond market companies will cope with this crisis, that may be the most challenging one. Are the synthetic diamonds the future of the industry? One hypothesis that can be made is that, considering their potential gain of market shares in the near future, lab-grown diamonds will be more and more widespread, causing a hard time for natural diamond companies. These businesses would indeed not be able to beat the competition of cheaper and cheaper synthetic and limitless diamonds.
However, because these diamonds may be (almost) commonplace, their price will also plummet in the long term, and create a huge price gap between natural and synthetic diamonds. This means that two specific markets will be recognizable. Experts need time and take a step back to determine the general future trend of the diamond industry.

But one thing is certain, like any other industry, diamond companies need to adequately listen to their customers to be able to make the right decisions and to thrive at all times.
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1. Bain’s 2011 report, figure 16

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*ALROSA is registered in Russia as an Open Joint Stock Company; **De Beers is part of Anglo American, which is a publicly listed company.

Source: Bain analysis
2. Bain’s 2018 report, figure 28

**Figure 28:** Three potential market scenarios exist based on how consumers perceive lab-grown diamonds

- **Low differentiation**
  - Customers will see lab-grown and natural diamonds as interchangeable except for highest-quality stones
  - Impact on natural value (2030): -25% to -30%

- **Medium differentiation**
  - Customers will differentiate two products on occasion except for low-quality stones
  - Impact on natural value (2030): -10% to -15%

- **High differentiation**
  - Customers will consider natural and lab-grown diamonds as two different products
  - Impact on natural value (2030): -0% to -5%

*Source: Bain & Company*
3. Lightbox’s lab-grown diamonds (website)
4. Bain’s 2018 report, figure 20

**Figure 20:** Industry players must adapt their marketing strategies to attract younger consumers

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<th>Tomorrow’s customers</th>
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Source: Bain & Company
5. Long-term Rough Diamond Price Versus Inflation (Paul Zimnisky)