

The Development of a Sustainable Supply Chain of Diamonds

History of the Diamond Trade

Earliest Origins



Diamonds have a long and illustrious history as a precious mineral that is valued by humans. The trade began in India, where diamonds were first mined. For the earliest period of human history, diamonds were not as coveted; but by the 4,000 BCE they were a valued material throughout the Indian subcontinent. For the next several thousand years, diamonds were mainly traded within India, among the wealthiest classes.¹ However,

some diamonds were able to filter out to nearby civilizations, such as China and the Ottoman Empire over this period. Eventually, these diamonds made their way to Europe, arriving via traders from the East, around the 15th and 16th centuries. Diamonds were quickly considered to be fashionable among wealthy Europeans, especially European royals. Upon the appearance of diamonds in Europe, a supply chain started to develop, with mines and diamond cutters in India, European trade routes around Africa (which were started, in part, in order to get access to luxury goods such as diamonds) and consumers in Europe. Overtime however, Europe began to develop its own network of diamond cutters and artisans, with Bruges, in modern-day Belgium, Amsterdam, and Paris becoming major centers of the European diamond trade. The autochthonous development of diamond cutting in Europe was a major accomplishment as cutting diamonds is an incredibly difficult task that requires a great deal of skill and artistry.

As European demand for diamonds continued to increase, the diamond supply in India began to decline. Meanwhile, the diamond supply in Latin America was just being discovered, with Brazil becoming the main source of diamonds for most of the 18th and 19th centuries.² European demand in the upper-classes continued to increase over the 1700s. However, as ideals of enlightenment became more widespread of the course of the 1800s and industrialization allowed for an increase in size of, or in some cases the creation of, a middle-class, demand for diamonds skyrocketed in Europe, Canada, and the United States. The middle-classes coveted diamonds for their beauty and as a status symbol to demonstrate their wealth. As the supply of diamonds in Brazilian mines began to decline, European

¹ "Diamonds: A History." *60 Minutes*. <https://www.cbsnews.com/news/diamonds-a-history/>.

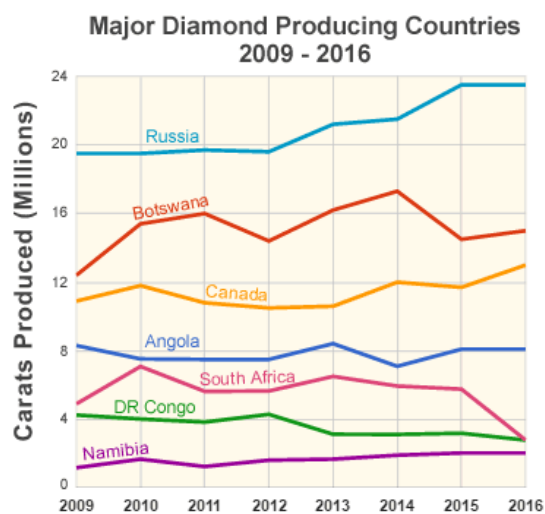
² Ibid.

imperialism in Africa was taking hold. European imperialists found diamonds throughout Africa, but most importantly in Southern Africa, where the British found one of the largest known diamond deposits.³ Whereas before diamonds were an incredibly rare mineral, this discovery inundated the diamond market and drove down price.⁴ In this period, the 1880s and 1890s, the De Beers Company was started, and it quickly monopolized South Africa diamond mines. By 1902, it controlled 90% of the world's diamond production and distribution. The story of diamonds from the 1890s until today is intrinsically intertwined with De Beers.

Diamond cutting was an incredibly profitable industry for diamond cutters and brokers in the years before the Second World War. The rising middle classes demanded more diamonds and cities around Europe developed into hubs for the diamond trade, especially Amsterdam, Antwerp, and Paris.⁵ Many cities founded diamond trade organizations for brokers and cutters. The most famous, an original, of these was The Diamond Exchange in Amsterdam. However; in World War II, the Diamond Exchange was attacked, and many of the diamond cutters were killed as 95% of those working with diamonds were Jewish.⁶ Some diamond cutting techniques were unfortunately lost, but many were preserved. The diamond industry suffered a short decline over this period.

Since World War II

As the economic success after the Second World War reached much of the developed world, the



hunger for diamonds increased. Diamonds continued to retain their beauty. However, to continue to increase demand, De Beers organized advertising campaigns in countries that were beginning to see large-scale economic prosperity, such as Germany and Japan. De Beers fought to maintain its monopoly, including undercutting the prices of its competitors and buying diamonds from potential competitors at inflated rates to prevent them from entering the market to compete with De Beers.⁷ Into the 21st century, growing diamond markets can be found in India, the Gulf States, China and Japan. As the middle

classes of these countries have grown, it is expected that demand for diamonds will continue to

³ Ibid.

⁴ "The Incredible Story of How De Beers Created and Lost the Most Powerful Monopoly Ever." *Business Insider*. <http://www.businessinsider.com/history-of-de-beers-2011-12?op=1>.

⁵ Amsterdam, City of Diamonds." *Royal Coster*. <https://www.costerdiamonds.com/amsterdam-city-diamonds/>.

⁶ Ibid.

⁷ "The Incredible Story of How De Beers Created and Lost the Most Powerful Monopoly Ever." *Business Insider*. <http://www.businessinsider.com/history-of-de-beers-2011-12?op=1>.

increase, especially because there are few signs that diamonds are any less coveted under the millennial generation.⁸ As of 2014, the diamond industry is an \$81 billion industry.

For most of human history, our understanding of diamonds and geology was fairly limited. This negatively impacted the ability to find diamond mines and contributed to an unstable supply of diamonds. In fact, through the entire pre-World War II period there would sometimes be a surfeit of diamonds and prices would be low, while other times there would be a low supply of diamonds and prices would be high. Major diamond mines are currently distributed throughout the world, with the most lucrative mines in Russia, Australia, Angola, South Africa, Botswana, and Canada. Potential mines continue to be prospected throughout all of these regions in addition to China, India, and Brazil. However, while distribution of diamonds is varied, it is thought that 65% are located in Africa.⁹ Although most diamonds on the international market come from large-scale mining operations, not all diamonds are from industrial mines, with many small-scale 'artisanal' mines producing diamonds. This is especially true in countries that are considered too unstable, such as the Democratic Republic of the Congo, for investment by De Beers and other mining companies.

What does it mean to be Sustainable?

In most contexts, sustainability only applies to respecting the environment. However, true sustainability is much larger. The United Nations determined in 1987 that sustainability encompassed environmental, social and economic metrics.¹⁰ To truly achieve sustainable development is to create economic activities that are respectful for the environment, nurture communities, and are economically responsible.¹¹ To create a truly sustainable diamond supply chain all three conditions must be satisfied.

The Costs Associated with Diamond Trade Today

Although diamonds are beautiful, the diamond trade is often not. De Beers exemplify many of the ugly aspects of the industry as it perennially takes advantage of poor countries for its own benefit. There are heavy environmental and economic costs associated with the diamond trade that negatively impact participants throughout the supply chain, from miners to consumers.

Environmental Costs

The most readily identifiable cost associated with the diamond trade is the environmental costs that occur during mining. Any type of mining will result in some type of pollution, yet pollution linked to diamond mining is a constant and poisonous threat to humans and the environment. In Zimbabwe,

⁸ "The Global Diamond Industry 2016: The Enduring Allure of Timeless Gems." *Bain and Company*. <http://www.bain.com/publications/articles/global-diamond-industry-report-2016.aspx>.

⁹ "Blood Diamonds." *Time Magazine*. <http://time.com/blood-diamonds/>.

¹⁰ "What is sustainability?" *Pittsburg State University*. <http://www.pittstate.edu/office/president/initiatives/sustainability/what-is-sustainability.dot>.

¹¹ Ibid.

pollution from diamond mines entered into a stream, poisoning the water supply of nearby residents; residents who drank or come into contact with the river have developed rashes and illnesses and cattle who have drank from it have died.¹² Pollution linked to diamond mining is not just a feature of developing nations, but also exists in mines in the developed countries. For example, at a Canadian mine in Ontario, mercury, a highly-toxic substance, leached into the environment, putting fish, plants and humans at risk of mercury poisoning.¹³ Government oversight is an important first step in ensuring that environmental regulations are followed, but in countries with lax regulations and a lack of respect for legal norms, such as Zimbabwe and Angola, it can be difficult to ensure that the environmental impact of diamond production is managed and mitigated.

Economic Costs

The economics of the diamond industry are not inherently negative, but they often have unintended consequences. For example, many countries that mine diamonds, particularly those in Africa, develop a dependence on diamonds that places their whole economy at risk. This gives diamond companies, brokers and other powerful interests throughout the supply chain powerful leverage over countries and their national and local leaders. Additionally, reliance on diamonds can prevent the development of other industries, as well as contribute to inequality. In many countries with diamonds, the economic wealth generated by diamonds is not equitably distributed. Sometimes only elites within a country see this wealth, while other times the wealth of diamonds remain with foreign elites and leave the country completely. This unequal distribution of wealth harms miners and non-miners alike, contributes to instability, and fails to nurture a sustainable economy. Moreover, working conditions in mines in many countries are poor, with miners in the Democratic Republic of the Congo heavily in debt, oftentimes skipping meals and rarely completing their schooling.¹⁴ It is of the utmost importance that environmental costs and economic costs associated with the diamond trade are addressed equally.

The Economic Benefits of the Modern Diamond Trade

While there are environmental and economic costs associated with the diamond trade, there are benefits of this industry. In many developing countries with mines, such as the Democratic Republic of the Congo, Botswana and Zimbabwe, revenue from diamonds make up an important economic life line. In Botswana, diamonds comprise 33% of its gross domestic product (GDP).¹⁵ While diamonds are not as important in all countries, they are still economically crucial. Additionally, throughout the

¹² "The Pollution Fallout From Zimbabwe's Blood Diamonds." *Yale University*.

http://e360.yale.edu/features/the_pollution_fallout_from_zimbabwes_blood_diamonds.

¹³ "Environmental groups takes De Beers to court over mercury monitoring at diamond mine near Attawapiskat." CBC News. <http://www.cbc.ca/news/canada/debeers-mercury-diamond-mine-attawapiskat-1.3883088>.

¹⁴ "Blood Diamonds." *Time Magazine*. <http://time.com/blood-diamonds/>.

¹⁵ "Economic Impact." *Diamond Facts*

http://www.diamondfacts.org/index.php?option=com_content%26view%3Darticle%26id%3D132%26Itemid%3D169%26lang%3Den

world many diamond mines are located in economically marginal areas, or places of little large-scale industrial economic activity. These places are often more remote and have higher unemployment and poverty rates compared to other more economically integrated areas. The diamond mines provide jobs to areas where, often, jobs are difficult to find. In this sense, diamond mines are an important employer for many people, especially in developing economies. Further up the supply chain, the economic benefits are vast for brokers and cutters. These individuals and groups profit from a very lucrative business, but these profits do not often find their way to those who do the mining. For these individuals, the diamond industry is an important source of economic stability that is not necessarily seen across many industries in their country. Moreover, while the negative costs of diamond mining are quite high, the best solution is not to simply end the diamond trade, as this would render miners unemployed. This solution would not advance the interests of miners, but rather harm their economic prosperity. Ultimately, the most important question in creating a more sustainable diamond industry is whether it is possible to more equitably spread the wealth that the diamond trade generates with people who work all along the supply chain, not just those who sell and cut diamonds. Currently, brokers and cutters see the vast majority of profits from diamonds. If a more economically sustainable supply chain is not developed then the diamond industry risks continuing to harm workers and increase global inequality.

Diamonds in Conflict



The United Nations defines conflict, or blood diamonds, as, "...diamonds that originate from areas controlled by forces or factions opposed to legitimate and internationally recognized governments, and are used to fund military action in opposition to those governments, or in contravention of the decisions

of the Security Council." In this sense, diamonds have often been used throughout Africa as a source of income for non-state actors or rogue governments.¹⁶ These diamonds would be sold on the legitimate diamond market, the black market for cash, or traded for weapons. Conflict diamonds can potentially come from anywhere that has diamonds, but mainly come from states in Central and Western Africa, such as the Democratic Republic of the Congo, Liberia, and Zimbabwe. In order to

¹⁶ "Blood Diamonds." *Time Magazine*. <http://time.com/blood-diamonds/>.

ensure that conflict diamonds were not being sold on the legitimate diamond market, De Beers, the United Nations and non-governmental organizations developed the Kimberly Process.

The Kimberly Process

The Kimberly Process is an important mechanism developed to try to ensure that diamonds are not fueling conflicts. Given that diamonds, among other precious natural resources such as oil, are often used by states and non-state actors in order to fund their military endeavors, it was important to ensure that diamonds were sourced according to basic ethnics. The Kimberly Process was formalized in 2000 and sought to provide certification for that were produced ethically. The process involves countries and companies monitoring how diamonds are produced, certifying their ethnical extraction, and increasing the transparency of the entire diamond supply chain.¹⁷ Cote d'Ivoire is the only current nation considered to have conflict diamonds, with its diamond mines held by rebel groups.¹⁸

However, many people challenge whether the process has been successful at rooting out diamonds that were being used to fuel conflict, or obtained through violence. Zimbabwe has continually been able to flout the Kimberly Process. Their mines are operated by groups with close ties to the military that beat and kill diamond miners who do not cooperate. To make matters worse, these efforts are being funded by several Chinese-Zimbabwe groups.¹⁹ In a sense, the Zimbabwe conflict diamonds would not be produced if not for existing demand for diamonds and foreign investment. Despite the evidence against Zimbabwe's diamonds, the Kimberly Process has certified them as ethical and legal for the legitimate international market.²⁰ While the Kimberly Process is a step in the right direction, it engages countries, international bodies, and diamond companies; it fails to actually enforce its lofty goals in many cases, ultimately proving ineffective.

Case Studies

Canada

Canada, which produces the 5th most diamonds, is best known for its vast and scenic countryside. However, lurking deep within the ground across northern Canada are massive diamond deposits. Companies, especially De Beers, have just begun to survey many of these untapped deposits. Although Canada might be an attractive place for diamond mining; owing to its integration into world markets, its larger internal consumer diamond market, and its political stability, Canada represents some of the most unsustainable tendencies of the diamond supply chain. Most exemplifying of these tendencies is the closure of the Snap Lake Diamond mine in the Northwest Territory. The mine opened in 2008, but was closed in 2016 after 8 years of not making a profit and

¹⁷ "What is the Kimberly Process?" *Kimberly Process*. <https://www.kimberleyprocess.com/en/what-kp>.

¹⁸ "FAQ." *Kimberly Process*. <https://www.kimberleyprocess.com/en/faq>.

¹⁹ <https://www.globalwitness.org/en/campaigns/conflict-diamonds/zimbabwe/financing-parallel-government/>

²⁰ "Zimbabwe: Kimberly Process on the Brink." *Human Rights Watch*. <https://www.hrw.org/news/2011/06/28/zimbabwe-kimberley-process-brink>.

environmental contamination to the surrounding ground water.²¹ While open, the mine provided an economic stimulus to the Canadian Arctic, an area that is usually economically marginal with higher rates of poverty than the rest of Canada. However, because of mismanagement by De Beers, the mine was forced to close, causing the layoff of nearly 400 workers.²² By closing Snap Lake, De Beers is only leaving behind an economically diminished area and pollution. In order to establish a truly sustainable diamond mine operation, the long-term operation of the mine and a respect for the environment must be established.

Botswana

In some ways, Botswana represents the greatest success of the diamond industry. Upon independence in 1966 Botswana was a country reliant on subsistent agriculture with only 7 miles of paved roads and a yearly per-capita income of about \$80.^{23,24} However, in 1967 a massive diamond mine was discovered. This diamond mine has fueled prosperity across Botswana, which is now classified as a middle income country with a GDP per capita growth rate of 5.8% and 1 in 20 jobs supported by the diamond industry.²⁵ Unlike other countries that have seen their diamond wealth squandered, Botswana has a unique partnership with De Beers, wherein Botswana and De Beers are 50-50 partners in the diamond industry within Botswana. Additionally, Botswana owns nearly a 15% share in De Beers. This arrangement is quite unique and it extends beyond just the diamond mines, with De Beers working to support schools, hospitals and anti-HIV initiatives in a country with one of the highest rates of HIV-infections. While this relationship has been positive, Botswana is incredibly susceptible to fluctuations in the diamond market, so it must work to diversify its economy in order to avoid economic calamity if diamond prices fall.

Questions to Consider

- How can the wealth of the diamond industry be more equally distributed along the supply chain?
- To what extent should the Kimberly Process be changed?
- How can unethically-sourced diamonds be best kept from the international market?
- In what ways can the economic benefits of diamond mining be balanced against its environmental costs?
- Can a sustainable diamond supply chain be developed?

²¹ “De Beers mine in Northwest Territories had water issues before closure.” *CBC News*.

<http://www.cbc.ca/news/canada/north/de-beers-mine-closure-water-1.3352186>.

²² “N.W.T.’s Snap Lake diamond mine halts operation, De Beers says.” *CBC News*. <http://www.cbc.ca/news/canada/north/n-w-t-s-snap-lake-diamond-mine-to-cease-operations-immediately-1.3350770>.

²³ “Botswana looks beyond diamonds as De Beers remakes itself.” *The Telegraph*.

<http://www.telegraph.co.uk/business/2016/10/22/botswana-looks-beyond-diamonds-as-de-beers-remakes-itself/>.

²⁴ “Diamonds are Forever in Botswana.” *The New York Times*.

<http://www.nytimes.com/2008/08/09/business/worldbusiness/09nocera.html?mcubz=0>.

²⁵ “Botswana looks beyond diamonds as De Beers remakes itself.” *The Telegraph*.

<http://www.telegraph.co.uk/business/2016/10/22/botswana-looks-beyond-diamonds-as-de-beers-remakes-itself/>.