DO CONSUMERS PREFER SUSTAINABLE DIAMONDS OVER NON-SUSTAINABLE DIAMONDS, AND ARE THEY WILLING TO PAY MORE FOR THE SAME?

Suhani Jain
Step By Step School


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ABSTRACT

The study looks at the demand and supply factors of consumers purchasing diamonds, and whether sustainability factors into it or not. Through consumer and retailer surveys, both sides of the market are assessed, with 128 consumer responses and 11 retailer responses. Various other literature was looked at, which reveals using dual market side approach has not been used before, which adds value to this research paper and is a methodological contribution. The results reveal that sustainability to be a rapidly growing trend amongst millennials in India, however, the trend is still latent. The research shows promising results of awareness increasing amongst Gen Z and reaching millennials as well, of being more environmentally conscious, and basing one's decisions on that. The results can be extended to the entire Indian market, taking into account the geographical limitations of the consumer profiles of the respondents of the surveys.

Key Words: Demand, Supply, Sustainability, decision making, Diamonds, Luxury, India

Introduction

Diamonds have long been treasured for their beauty and durability, finding applications in fields as diverse as electronics, industrial cutting, and jewellery. However, the increasing demand for diamonds also poses questions about the sustainability of current mining practices. In recent years, sustainable mining has become a focus of discussion, both from an environmental and an economic perspective. Yet, it remains unclear whether the push for sustainability is influencing consumer demand, or if perceptions about sustainable practices are shaping supply-side decisions. This paper aims to explore these intricate relationships, examining how sustainable mining practices are affecting the diamond market's supply and demand dynamics.
The increase in mining practices raises the question of sustainability and its impact on the environment. An increase in diamond mining can damage the environment and lead to soil erosion, water pollution, and habitat loss and destruction. Sustainable mining, which is the extraction of raw materials without harming the environment, is one way to minimize environmental damage. This includes the use of equipment such as electric motors that reduce carbon dioxide emissions, reuse of mine waste, advanced land reclamation techniques, etc. With global warming on the rise and sustainability alarms being raised around the world, this issue is a priority.

There has been a shift seen of the upcoming generations being more mindful and aware of the effects of mining. Being more conscious about the environment, they seem to take decisions prioritizing the ecosystem. According to Nielsen, 75% of Millennials are eco-conscious to the point of changing their buying habits to favour environmentally-friendly products. However, in terms of the diamond market, India witnesses people buying products based on the size, clarity, shine and quality. Sales exponentially rise on festivals such as Diwali and Akshay Tritiya to name a few, and on special occasions such as weddings. The ownership of diamonds is a symbol of power, status and opulence. Considering people’s mindset, there are extremely different priorities. Most people assume that the higher the price would be, the better quality and more valuable the jewellery would be. Purchasing a diamond since it is sustainable and eco-friendly is not a general trend. Being a developing country having low literacy rates and strong cultural ties, there is a lack of awareness about the topic, and it is a relatively foreign concept.

The research aims to study the factor of sustainability in consumer demand for diamonds sold as luxury goods, seen through a survey. The survey designed for consumers was circulated amongst possible diamond customers, with their consumer profile in mind. The survey designed for retailers was circulated amongst a few diamond retailers. This helped match supplier perceptions of preferences with actual demand-side preferences, making the surveys align. Most of the literature available focuses on the consumer side, and is one sided, while this paper brings forth a 360 degree picture of the diamond market in India, highlighting information gaps between the two sides of the market. Apart from this, most existing research is done on a particular luxury product, or an industry, while this research paper focuses on a specific product, diamonds. Focusing on the raw material of the jewellery, rather than the perceptions of the finished good is not explored before.

The primary research gathered shows sustainability being a latent trend in India. There is a lack of awareness amongst consumers about sustainable mining practices. 20% of the respondents were not aware, and 37.6% were slightly aware. Asymmetric information between consumers and suppliers is also highlighted. Just 9.09% of retailers feel consumers give sustainability importance, while 31.25% consumer respondents are willing to prioritize sustainability, and
70.4% are even willing to pay a premium. Overall, the trend of sustainability is latent in India, and is likely to develop amongst millennials and Generation Z in the future. However, the results may not be generalisable due to certain limitations. This includes socially desirable bias. In a survey approach, respondents can answer in line with what is perceived to be socially appropriate, which hampers results. Furthermore, the age bracket is concentrated between 40-50 years, which does not give enough insight into the opinions of the younger generation. The research is also limited to a single geography. A wider survey could have indicated more specific consumer trends which differ based on cultural and regional preferences, making that more generalizable than the current data.

**Literature review**

Brandão and Miranda (2022) use a self-complete survey (a survey that is designed to be completed by the respondent without the assistance of an interviewer) to examine the direct and indirect effects of sustainability on consumers’ intention to purchase luxury services. The authors demonstrate that individuals with a higher level of sustainability consciousness exhibit a stronger inclination towards sustainable luxury consumption and that self-expression, perceived social image, and hedonism are primary predictors of purchase intention.

Kapferer and Michaut (2015) explores the evolving relationship between luxury and sustainability. Using a survey done on 966 luxury consumers in France, operationalising their perception of luxury based on outstanding quality, hedonism, price, rarity, selective distribution and associated services, exclusivity and creativity, they got information on consumer preferences of the same. It highlights that while a minority of luxury customers prioritize sustainability, there is a growing expectation for luxury brands to embody sustainable values, that could lead to reputation risks if there is a failure of addressal. The study emphasizes the need for luxury brands to communicate their sustainable features and emphasize quality along with a gap between customer perceptions and sustainable luxury.

Another empirical case study explores the relationship between sustainability and the purchase intention of luxury goods in India, specifically focusing on the impact of the three dimensions of materialism on consumer purchases. The authors used research data obtained via an administered close-ended structured questionnaire, and quantitative data obtained from the probability sampling via a standardised questionnaire aid. The findings indicate that the sub-traits of possessiveness, non-generosity, and envy positively influence the purchase intention of sustainable luxury products. However, consumer attitudes show a negative relationship with purchase intention in this context, suggesting that sustainable luxury brands should emphasize materialistic traits in their marketing strategies to create awareness of the sustainable aspects and higher price of their products.
Alghanim and Ndubisi (2022) highlights the paradoxical nature of the concepts of luxury and sustainability, with the former considered as a profligate indulgence while the latter pivots around mindful frugality. The relationship between signalling theory, luxury indulgence and sustainable consumption is successfully put under the theoretical lens to understand the hypothesized relationship between luxury consumptions and motives of sustainable luxury consumers. A quantitative approach is taken using a survey, with 348 responses that sheds light on consumer consumption, consumption behaviours for luxury goods, luxury value perceptions and sustainable luxury purchasing behaviours. The study reveals that people consume luxury products with sustainable features to improve the way others perceive them in society, showcasing interpersonal value perceptions as significant drivers of sustainable luxury consumption.

The study by Yun Chang and Kapasuwan (et.Al 2022) attempts to assess the effects of various sustainable luxury attributes on purchase intention and to segment customers based on their preferences. Sustainable authentic luxury brands make positive contributions by creating products by luxury attributes that appeal to the consumers. Ethical luxury has been ambivalent. The study uses choice-based conjoint analysis and cluster analysis, where 354 consumers of Generation Y and Z were used, and existing research was analysed and divided for the latter. The participants were asked about their preferences of sustainable luxury attributes such as uniqueness, quality heritage, sustainable materials, supply chain transparency and sustainable process of jewellery, and most respondents preferred sustainable processes, quality and heritage.

In my study a quantitative approach using a survey, similar to other literature available, is used. However, instead of looking at just consumer perspectives, I surveyed the retailers as well to see if there were any asymmetric views on preferences towards sustainability between the two. Most of the literature available focuses on the consumer side, and is one sided. My research brings forth a 360 degree picture of the diamond market in India, highlighting any information gaps between the two sides of the market. Apart from this, most existing research is done on a particular luxury product, or an industry, while my research paper focuses on diamonds, which are an ingredient for industries such as electronics and jewellery. Focusing on the supply and demand side of the market, as well as the source of raw materials has not been done before. Usually economist look at the perceptions of the finished product.

**Methodology and results**

Research methodologies are strategies used by researchers to gather, analyse, and interpret data in a systematic manner. For this research paper, a mixed method of research – quantitative and qualitative method- is used, which gives a comprehensive insight on the topic of sustainability. Data is collected from both sides of the market- consumers and retailers- using a survey, which
gives an insight on the demand and supply factors of purchasing a diamond, and whether sustainability is taken into consideration.

**Consumer and survey responses**

The consumer questionnaire aims to understand consumer preferences and motivations to buy diamonds in the Indian market. The survey had a total of 128 responses. The first two questions collected basic demographic data about the participants about their age and income bracket. The total range of ages are from 21 years to 80 years, while 74% are aged between 41-50. The monthly household income bracket ranged from 1 lakh to over 10 lakhs. 29.9% respondents have an income of 1-5 lakhs, 18.9% have an income of 5-10 lakhs, and 24.4% have an income over 10 lakhs. However, 22% of respondents preferred not to disclose this information. Next the questionnaire asks respondents about the decision making, channel and frequency of the diamond purchase. 52% respondents buy diamonds from a family jeweller, while others buy it from chain stores, or don't make the purchase themselves. The responses of the frequency of purchase show that 64.5% of people buy diamonds on special occasions, or rarely. With that, the survey alludes towards the core of sustainability, and consumer inclination towards the same.

Consumer preferences towards the essentiality of knowing the source of the diamond is studied through a 7-point scale. Research confirms that data from Likert items (and those with similar rating scales) becomes significantly less accurate when the number of scale points drops below five or above seven. [Johns, R. (2010)]. 84% respondents feel it is most important to look at certifications while buying a diamond, while just 31% pick sustainability as their most important factor. The factors that influence consumer decisions like price, quality, design, size, source and sustainability etc are covered to understand the importance of the role each of these play while a consumer makes a decision. Almost 100% respondents consider quality to be the most essential demand factor, with sustainability being the most important factor for approximately 35% of respondents. The questionnaire then asked consumers whether they would be willing to pay a premium for a sustainable diamond, and how much to assess their commitment to sustainable products. The options of the premium included 0-5%, 5-10%, 10-15%, 15-20% and no premium. 32% selected 0-5%, 29.6% selected 5-10%, 8.8% selected 10-15%, while 22.4% selected to pay no premium. Lastly, the survey assessed how aware respondents are about the environmental damage the extraction of mining causes, and whether the knowledge of the same impacts their buying decision. 70.4% are aware to some extent, however 20% were not aware at all. This awareness of the environmental impacts changes the decision of buying a diamond completely for 8.7% people, while 40.7% are just slightly affected by it.
Retailer questionnaire and responses

The retailer survey aims to study the same areas in question as the consumer survey, viewing it from the supply side. This questionnaire got 11 responses. The first question asks retailers the average age of the consumer who walks into the store, to compare the results with the consumer survey. 45.5% retailers feel the age of majority customers to be 40-50 years and 45.5% feel it to be 30-40. Next, the questionnaire asks retailers about the frequency of consumers inquiring about the source of the diamond through a 5-point scale. The literature suggests that five-point scale appears to be less confusing and to increase response rate (Babakus and Mangold, 1992; Devlin et al., 1993; Hayes, 1992). 72.8% consumers ask about the source somewhat frequently, while 9.1% do not ask at all. Next, price, quality, design, size, source, sustainability and ethicality were asked to be ranked in order of what retailers think consumers consider to be most and least important. 81.8% chose verification being the most important factor for consumers, and 36.4% retailers feel consumers consider sustainability is what consumers look for while purchasing a diamond. 54.5% retailers feel consumers are slightly committed towards sustainability, and 36.4 retailers feel they are not that committed. Following this, retailers' views on how much premium consumers would be willing to pay is asked, with the options including 0-5%, 5-10%, 10-15%, 15-20% or no premium. 54.5% retailers chose 0-5% as being the most common amount of premium being paid. Retailer respondents are also asked the amount of effort they put in sourcing sustainable diamonds, to assess their commitment to being eco-friendly on a 5-point scale. 54.5% vote a 4 out of 5, while 36.4% vote 5 out of 5.

Analysis

Sustainability is a global trend that has been rapidly becoming popular since the onset of major environmental changes. With Generation Z being in the driver’s seat, Millennials have not been far behind in adopting these changes in their lifestyles with increasing awareness over the issue. Even in the luxury industry pertaining to diamonds, the carbon footprint has been a persistent issue that has been talked about for a long period of time, with people becoming more mindful of the same. The consumer and retailer surveys conducted are reflective of this to some extent. India being a developing country, does not have such strong driving views about sustainability, and it is not consumers’ main concern. However, the research shows that the trend is latent, and not prime.

The mode age of the respondents was 40-50 years, i.e., Generation X and the millennials of the country. Most of them indicated through their responses that they were aware about sustainability in diamonds, but not to a large extent. 40 respondents indicated that out of price, quality, sustainability, design, size and source, sustainability was the most important factor that they would consider during a purchase. Furthermore, 70.4% respondents were willing to pay a
premium ranging from 0-15% above the market price for a sustainable diamond being offered to them. This strongly supports the claim of the trend of sustainability being prevalent amongst consumers to a large extent, and research indicates that with increased awareness amongst individuals, the numbers will just increase.

The retail side of the survey – supply chain – also clearly reflects today and tomorrow very differently. The leading retailers of India – particularly Chains and organized players – consider sustainability, brands and provenance as an important consideration for the future, today elements are around design, grading certificates, offers and pricing.

The retail side of the market- supply chain- showcases that retailers have a slightly different perception of what consumers consider to be important while buying diamonds. According to the survey, retailers confirm to see more millennials and Gen Z walk into stores, as compared to people aged 40-50. Apart from this, only 1 respondent answered that consumers consider sustainability to be the most important deciding factor, while majority indicated that others such as price, quality, etc took precedence. This contrasts the results the consumer survey had, since quite a few consumers considered sustainability in a diamond to be a very important deciding factor, leading us to think this may be one such place where there is a gap in the market regarding information. In terms of the premium consumers will be willing to pay, retailers feel majority customers would want to pay a 0-5% premium, while consumers indicated that more than 60% were willing to pay between 0-10%. Again, this highlights asymmetric information between both sides of the market. Lastly, the degree of commitment that retailers feel that consumers have, is milder than what consumers indicate it is. Through the survey results, it can be inferred that despite not being 100% committed to going green and being environment-conscious, most consumers feel they have completed 3/4th of the journey. On the other hand, retailers feel consumers seem to be inclined to sustainability, but the trend seems to be relatively foreign, and the degree of commitment is not great.

However, there are two key points which indicate that sustainability will be a growing trend:

1. Awareness: which is currently low, in particular for Diamonds, certainly will increase in the future and will align to overall luxury consumption.

2. Profits: the retailer’s belief that consumers will be willing to pay more will be the most important driver of availability and acceleration of this trend
Analysis and key interpretation:

<table>
<thead>
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<th>Consumers</th>
<th>Retailers</th>
<th>Key point</th>
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<td>Mode age is 30-40</td>
<td>Change</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Family decision</td>
<td>More and more self purchase, individuals deciding</td>
<td>Big change</td>
</tr>
<tr>
<td>Sustainability</td>
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<td>50% consumers believe it is important / very important</td>
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</tr>
<tr>
<td>Certification/Source</td>
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<td>Growing significance - 35% consumers consider this</td>
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<tr>
<td>Price Premium</td>
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<td>5-10% if source and sustainability is given - more profits</td>
<td>Change</td>
</tr>
<tr>
<td>Key Considerations</td>
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<td>Price/Design/Trust</td>
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<td>Awareness</td>
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<td>Big Change for future</td>
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Conclusion

This research explores whether consumers prefer sustainable diamonds over non-sustainable diamonds, and whether they are willing to pay more for it. Through the survey method, both the consumer and retailer side of the market is analysed, which gives an insight from two varying perspectives. In the Indian market, the trend of sustainability pertaining to consumers is seen to have strong commitment by consumers. Most of them are aware about the environmental impacts about the diamond industry to some extent and show a considerable degree of commitment towards the environment. Retailers seem to be committed to providing responsibly sourced diamonds as well, but there seems to be a gap in the market in terms of the degree of commitment retailers think consumers have, versus what they actually seem to have. This research paper adds to existing research by looking at the retailer side of the market as well, providing a 360-degree approach to the issue. Furthermore, it can be used by companies as an effective tool to improve their sales by working on the information gaps pointed out. By triangulating the data collected, the research shows signs of the latent trend of sustainability in India.
Limitations of the Research / Survey:

The research has certain limitations, one of which is social desirability bias. In a survey approach, respondents could answer in line with what is perceived to be socially appropriate. Another limitation may be that the survey respondents are concentrated within a higher age bracket, which is between 40-50 years. Perhaps a different result would have been seen if the second phase of the survey focused only on the millennials and Gen Z, hence there is a sampling bias. Next, the survey shows that the purchase of diamonds is not frequent, with some frequencies being as much as once a year. This leads to consumers responding to the survey based on purchases made as far back as a year or more ago, leading to a memory recall bias. Furthermore, the sample size of the survey is 127 for the consumer survey, and just 11 for the retailer survey. This is also limited to a single geography. Perhaps a wider survey could have indicated more specific consumer trends which differ based on cultural and regional preferences, making that more generalizable than the current data. Lastly, the data collected from consumers and retailers has been only digital. Perhaps the response rate could have been better with a face-to-face interaction, where more anecdotal information could have been collected.

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