

LUISS 

Corso di Laurea in Management

Cattedra Advanced Marketing Management

Marketing Strategies and their Influence on Consumer Preferences:  
A Study of Natural vs Lab-Grown Diamonds

Prof. Marco Francesco Mazzù

-----  
RELATORE

Prof. Matteo De Angelis

-----  
CORRELATORE

Nora Regina Schraffl  
Matricola 771471

-----  
CANDIDATO

## **Abstract**

The diamond industry is undergoing rapid transformation, driven by emerging trends and shifting consumer preferences. Lab-grown diamonds are becoming increasingly popular as an alternative to natural diamonds, encouraged by growing interest in sustainability, affordability, and ethical concerns. In this evolving market, marketing strategies play a crucial role in shaping purchasing decisions. This research examines the extent to which marketing strategies impact consumer intentions for lab-grown versus natural diamonds and identifies the most effective approaches. Using a survey-based quantitative method, individual strategies—such as price, ethical considerations, emotional appeal, and exclusivity—were tested separately. The findings reveal that while marketing strategies significantly influence consumer behavior, they have a stronger impact on natural diamonds. Price and ethical concerns favor lab-grown diamonds, while emotional appeal, exclusivity, and luxury branding reinforce the desirability of natural diamonds. Demographic factors, including age and income, also influence purchasing preferences, with younger consumers showing greater openness to lab-grown diamonds. This study may serve as a foundation for further research on the role of marketing strategies in consumer decision-making within the diamond industry.

***Keywords:** diamond industry, lab-grown diamonds, natural diamonds, marketing strategies, purchasing intentions, consumer behavior, sustainability, ethical considerations, luxury branding*

## Table of Contents

<b>1 Introduction</b> .....	<b>10</b>
<b>2 Contributions and Aims</b> .....	<b>14</b>
<b>3 Literature Review</b> .....	<b>16</b>
<b>3.1. Introduction to the Diamond Market</b> .....	<b>16</b>
<b>3.2. Marketing Strategies for Diamonds</b> .....	<b>17</b>
<b>3.3. Consumer Behavior in the Diamond Market</b> .....	<b>20</b>
<b>3.4. Consumer Perceptions and Market Trends</b> .....	<b>22</b>
<b>3.5. Research Gaps and Relevance</b> .....	<b>25</b>
<b>3.6. Hypothesis</b> .....	<b>27</b>
<b>4. Methodology</b> .....	<b>27</b>
<b>4.1. Research Methodology Overview</b> .....	<b>28</b>
<b>4.2. Marketing Strategy Testing</b> .....	<b>30</b>
<b>4.3. Data Collection Tool: Questionnaire Structure and Purpose</b> .....	<b>31</b>
<b>5 Results</b> .....	<b>35</b>
<b>5.1. Results Demographics</b> .....	<b>35</b>
<b>5.2. Results Awareness</b> .....	<b>41</b>
5.2.1. Purchasing History.....	41
5.2.2. Knowledge of the Difference Between Lab and Natural Diamonds.....	41
5.2.3. Preference Testing .....	42
5.2.4. Decision-Making Criteria.....	43
<b>5.3. Results Crosstabulations</b> .....	<b>45</b>
5.3.1. Gender and Diamond Purchasing .....	45
5.3.2. Income and Diamond Purchasing .....	46
5.3.3. Location and Diamond Purchasing .....	47
<b>5.4. Consumer Likelihood to Purchase Lab-Grown vs. Natural Diamonds Across Different Marketing Strategies</b> .....	<b>50</b>
5.4.1. Impact of Pricing on Consumer Purchase Intentions .....	50

5.4.2. Impact of Environmental Sustainability on Purchase Intentions .....	51
5.4.3. Impact of Emotional Appeal and Tradition on Purchase Likelihood.....	53
5.4.4. Impact of Luxury Branding and Exclusivity on Purchase Likelihood.....	55
5.4.5. Impact of Customization Options on Purchase Likelihood.....	56
5.4.6. Impact of Celebrity Endorsements and Prestige on Purchase Likelihood.....	58
5.4.7. Impact of Ethical Considerations on Purchase Likelihood.....	60
5.4.8. Impact of Limited-Time Discounts on Purchase Likelihood.....	61
<b>5.5. Hypothesis Testing .....</b>	<b>64</b>
5.5.1. Testing the Assumptions .....	64
5.5.2. Testing Effectiveness of Individual Marketing Strategies .....	69
5.5.3. Testing the Overall Effectiveness of Marketing Strategies on Purchasing Intentions for Lab-Grown vs. Natural Diamonds.....	79
5.5.4. Testing The Hypothesis Including Control Variables.....	83
<b>6 Discussion.....</b>	<b>89</b>
<b>6.1. Discussion of Hypothesis Testing.....</b>	<b>89</b>
<b>6.2. Discussion of Findings .....</b>	<b>90</b>
6.2.1. Demographic Insights and Consumer Awareness .....	90
6.2.2. Consumer Preferences for Lab-Grown and Natural Diamonds Across Marketing Strategies ...	91
6.2.3. Effectiveness of Individual Marketing Strategies on Consumer Purchase Intentions.....	92
<b>6.3. Limitations of the Study .....</b>	<b>95</b>
<b>7 Conclusion and Outlook.....</b>	<b>97</b>
<b>References.....</b>	<b>100</b>
<b>Appendix A – Survey Questionnaire.....</b>	<b>107</b>
<b>Appendix B – Codebook and Manipulations.....</b>	<b>114</b>

## List of Tables

Table 1 Gender Distribution of Respondents (N = 213).....	35
Table 2 Age Distribution of Respondents (N = 213).....	36
Table 3 Annual Income Distribution of Respondents (N = 213).....	37
Table 4 Current Location of Respondents (N = 213) .....	38
Table 5 Country Breakdown of Respondents (N = 213) .....	39
Table 6 Purchasing History (N = 213).....	41
Table 7 Knowledge of the Difference (N = 213).....	42
Table 8 Preference Testing (N = 213).....	42
Table 9 Overview of Diamond Purchase Criteria.....	43
Table 10 Crosstabulation of Gender and Diamond Purchasing Behavior .....	45
Table 11 Chi-Square Tests for Gender and Diamond Purchasing Behavior .....	45
Table 12 Crosstabulation of Diamond Purchase Behavior and Annual Income .....	46
Table 13 Chi-Square Tests for Diamond Purchasing Behavior and Annual Income .....	47
Table 14 Crosstabulation of Diamond Purchase Behavior and Current Location.....	48
Table 15 Chi-Square Tests for Diamond Purchasing Behavior and Current Location.....	48
Table 16 Likelihood of Purchasing a Lab-Grown Diamond When Knowing It Looks Identical but Costs Less .....	50
Table 17 Likelihood of Purchasing a Natural Diamond When Knowing Lab-Grown Diamonds Look Identical but Cost Less.....	50
Table 18 Likelihood of Purchasing a Lab-Grown Diamond Due to Environmental Benefits.	52
Table 19 Likelihood of Purchasing a Natural Diamond Due to Environmental Benefits .....	52
Table 20 Likelihood of Purchasing a Lab-Grown Diamond Despite Traditional Symbolism	54
Table 21 Likelihood of Purchasing a Natural Diamond Due to Traditional Symbolism .....	54
Table 22 Likelihood of Purchasing a Lab-Grown Diamond Despite Luxury Branding and Exclusivity .....	55
Table 23 Likelihood of Purchasing a Natural Diamond Due to Luxury Branding and Exclusivity .....	55
Table 24 Likelihood of Purchasing a Lab-Grown Diamond Due to Customization Options..	57
Table 25 Likelihood of Purchasing a Natural Diamond Despite Customization Options in Lab-Grown Diamonds .....	57

Table 26 Likelihood of Purchasing a Lab-Grown Diamond Despite Celebrity Endorsements and Prestige .....	58
Table 27 Likelihood of Purchasing a Natural Diamond Due to Celebrity Endorsements and Prestige.....	59
Table 28 Likelihood of Purchasing a Lab-Grown Diamond Due to Ethical Considerations .	60
Table 29 Likelihood of Purchasing a Natural Diamond Despite Ethical Concerns .....	60
Table 30 Likelihood of Purchasing a Lab-Grown Diamond Despite Limited-Time Discounts on Natural Diamonds .....	62
Table 31 Likelihood of Purchasing a Natural Diamond Due to Limited-Time Discounts .....	62
Table 32 Model Summary for Lab-Diamonds .....	65
Table 33 Model Summary for Natural Diamonds .....	65
Table 34 Tests of Normality for Unstandardized Residuals .....	66
Table 35 Regression Coefficients for Predicting Overall Likely Purchase .....	68
Table 36 Descriptive Statistics for Price Strategy .....	69
Table 37 Paired Samples t-Test for Price Strategy .....	69
Table 38 Correlation Between Preferences for Price Strategy .....	70
Table 39 Effect Size for Price Strategy.....	70
Table 40 Descriptive Statistics for Environmental Sustainability Strategy .....	70
Table 41 Paired Samples t-Test for Environmental Sustainability Strategy.....	70
Table 42 Correlation Between Preferences for Environmental Sustainability Strategy .....	71
Table 43 Effect Sizes for Environmental Sustainability Strategy .....	71
Table 44 Descriptive Statistics for Emotional Appeal Strategy .....	71
Table 45 Paired Samples t-Test for Emotional Appeal Strategy .....	71
Table 46 Correlation Between Preferences for Emotional Appeal Strategy .....	72
Table 47 Effect Sizes for Emotional Appeal Strategy .....	72
Table 48 Descriptive Statistics for Luxury Strategy .....	72
Table 49 Paired Samples t-Test for Luxury Strategy.....	73
Table 50 Correlation Between Preferences for Lab-Grown and Natural Diamonds (Luxury Strategy).....	73
Table 51 Effect Sizes for Luxury Strategy .....	73
Table 52 Descriptive Statistics for Customization Strategy .....	74
Table 53 Paired Samples t-Test for Customization Strategy .....	74
Table 54 Correlation Between Preferences for Lab-Grown and Natural Diamonds (Customization Strategy) .....	74

Table 55 Effect Sizes for Customization Strategy .....	74
Table 56 Descriptive Statistics for Celebrity Strategy .....	75
Table 57 Paired Samples t-Test for Prestige Strategy .....	75
Table 58 Correlation Between Preferences for Celebrity Strategy .....	75
Table 59 Effect Sizes for Prestige Strategy .....	76
Table 60 Descriptive Statistics for Ethical Production Strategy .....	76
Table 61 Paired Samples t-Test for Ethical Production Strategy .....	76
Table 62 Correlation Between Preferences for Ethical Production Strategy .....	77
Table 63 Effect Sizes for Ethical Production Strategy .....	77
Table 64 Descriptive Statistics for Special Discount Strategy .....	77
Table 65 Paired Samples t-Test for Special Discount Strategy .....	78
Table 66 Effect Sizes for Special Discount Strategy .....	78
Table 67 Correlation Between Preferences for Special Discount Strategy .....	78
Table 68 Pearson Correlation Between Overall Likely Purchase and Marketing Strategy ....	79
Table 69 Model Summary of Linear Regression for Lab-Grown Diamonds .....	79
Table 70 Regression Coefficients for Lab-Grown Diamonds .....	80
Table 71 Descriptive Statistics for Purchasing and Marketing Strategy .....	80
Table 72 Pearson Correlation Between Overall Likely Purchase and Marketing Strategy ....	81
Table 73 Model Summary of Linear Regression for Natural Diamonds .....	81
Table 74 ANOVA Summary for Natural Diamonds .....	81
Table 75 Residuals Statistics for Natural Diamonds .....	82
Table 76 Control Variables Used in the Analysis .....	83
Table 77 Regression Results: Control Variables and Lab-Grown Diamond Purchasing Intention .....	84
Table 78 Regression Coefficients for Control Variables and Purchasing Intention (Lab- Grown Diamonds).....	85
Table 79 Regression Results: Control Variables and Natural Diamond Purchasing Intention	86
Table 80 Regression Coefficients for Control Variables and Purchasing Intention (Lab- Grown Diamonds).....	86
Table 81 SPSS Codebook for Survey Variables .....	114

## List of Figures

Figure 1 Gender Distribution .....	36
Figure 2 Age Distribution .....	37
Figure 3 Income Distribution .....	38
Figure 4 Location Distribution.....	38
Figure 5 Country Distribution.....	40
Figure 6 Purchasing History .....	41
Figure 7 Knowledge of Diamond Differences .....	42
Figure 8 Mean Scores for Diamond Buying Factors .....	44
Figure 9 Diamond Purchase Behavior by Region.....	46
Figure 10 Diamond Purchase Behavior by Region.....	48
Figure 11 Impact of Price on Purchase Likelihood .....	51
Figure 12 Impact of Environmental Sustainability on Purchase Likelihood .....	53
Figure 13 Impact of Emotional Appeal on Purchase Likelihood .....	54
Figure 14 Impact of Luxury Strategy on Purchase Likelihood.....	56
Figure 15 Impact of Customization on Purchase Likelihood .....	58
Figure 16 Impact of Celebrity on Purchase Likelihood.....	59
Figure 17 Impact of Ethical Production on Purchase Likelihood.....	61
Figure 18 Impact of Limited-Time Discounts on Purchase Likelihood .....	62
Figure 19 Scatterplot of the Correlation Lab-Diamonds .....	64
Figure 20 Scatterplot of the Correlation Natural Diamonds .....	65
Figure 21 Distribution of Unstandardized Residuals.....	66
Figure 22 Normal Q-Q Plot of Unstandardized Residuals .....	67
Figure 23 Effects of Gender and Income on Diamond Purchases .....	88
Figure 24 Introduction .....	107
Figure 25 Prior Diamond Purchase History .....	107
Figure 26 Knowledge of Diamond Types.....	107
Figure 27 Diamond Purchase Preference.....	108
Figure 28 Ranking Factors in Diamond Purchase Decision .....	108
Figure 29 Price Influence on Purchase Likelihood.....	108
Figure 30 Environmental Impact on Purchase Decision.....	109
Figure 31 Emotional and Symbolic Value of Natural Diamonds .....	109

Figure 32 Luxury and Exclusivity of Natural Diamonds.....	109
Figure 33 Customization and Personalization of Lab-Grown Diamonds.....	110
Figure 34 Celebrity Endorsement and Prestige of Natural Diamonds.....	110
Figure 35 Ethical Considerations in Diamond Production	
Figure 36 Influence of Limited-Time Discounts on Natural Diamonds.....	110
Figure 37 Final Purchase Decision After Questionnaire .....	111
Figure 38 Gender Identity .....	111
Figure 39 Age Group .....	112
Figure 40 Annual Income .....	112
Figure 41 Country of Residence .....	113
Figure 42 End of Survey .....	113

## 1 Introduction

The diamond industry is experiencing a transformative shift with the rise of lab-grown diamonds, presenting consumers with alternatives to traditional mined stones (Lodha, 2024). Lab-grown diamonds are chemically and physically identical to natural diamonds, offering benefits such as ethical sourcing, environmental sustainability, and affordability (Mihailovich et al., 2021). These advantages have led to a shift in consumer preferences, particularly among younger demographics who prioritize sustainability and ethical considerations (Keech et al., 2020). However, the traditional allure of natural diamonds, often reinforced by longstanding marketing campaigns, continues to influence purchasing decisions (Purinton, 2012). This study aims to explore the marketing strategies employed for both natural and lab-grown diamonds and their impact on consumer preferences. By analyzing current market trends and consumer perceptions, this study seeks to understand how marketing influences the choice between natural and lab-grown diamonds.

The diamond industry has long been characterized by its association with luxury, rarity, and enduring value. Traditional marketing campaigns, such as De Beers' iconic "A Diamond Is Forever," have ingrained the perception of natural diamonds as essential symbols of love and commitment (Francis-Tan and Mialon, 2014). This narrative has been instrumental in establishing the cultural significance of mined diamonds and sustaining consumer demand over the decades (Spar, 2006).

In recent years, however, the emergence of lab-grown diamonds has introduced a paradigm shift in the market (Sun, Jiang, & Wang, 2024). Advancements in technology have enabled the production of gem-quality diamonds in controlled environments, offering consumers stones that are virtually indistinguishable from their natural counterparts in terms of chemical composition and physical properties (Murphy, Biesheuvel, & Elmquist, 2015). Notably, lab-grown diamonds are produced without the environmental degradation and ethical concerns associated with traditional mining practices (Liu, 2024). This aspect resonates with environmentally conscious consumers who are increasingly prioritizing sustainability in their purchasing decisions (Bagathi et al., 2021).

The market dynamics between natural and lab-grown diamonds have been further influenced by pricing trends. According to industry reports, the average price of a one-carat natural diamond decreased by approximately 26.7% between May 2022 and December 2024, while

lab-grown diamonds experienced a more significant decline of about 73.8% in the same period (McKinsey & Company, 2023). This substantial reduction in the cost of lab-grown diamonds has made them an attractive option for consumers seeking larger or higher-quality stones at more accessible price points.

Consumer preferences have also evolved, with a notable increase in the acceptance of lab-grown diamonds. A survey conducted by The Knot revealed that 46% of couples in 2023 chose lab-grown diamonds for their engagement rings, a significant rise from 12% in 2019. This trend indicates a shifting perception, where the traditional emphasis on the rarity and natural origin of diamonds is being balanced against considerations of ethics, sustainability, and value (Bates, 2024).

In response to these developments, companies specializing in lab-grown diamonds have implemented marketing strategies that highlight their products' ethical sourcing, environmental benefits, and affordability. Brands like Lark & Berry have positioned themselves as pioneers in offering sustainable luxury, appealing to consumers who are mindful of the social and environmental implications of their purchases (Ioannou & Mickshik, 2025).. These marketing efforts aim to redefine the narrative around diamonds, challenging the traditional perceptions upheld by mined diamond proponents (Ioannou & Mickshik, 2023).

Conversely, stakeholders in the natural diamond industry have intensified their marketing campaigns to reinforce the unique value proposition of mined diamonds. Emphasizing the geological formation over billions of years, the inherent rarity, and the historical significance of natural diamonds, these campaigns seek to preserve the allure and perceived value that have long been associated with mined stones. By focusing on the emotional and symbolic aspects, the natural diamond industry aims to maintain its relevance amidst the growing popularity of lab-grown alternatives (Spar, 2006).

Given the ongoing shifts in consumer behavior and the competing marketing narratives surrounding natural and lab-grown diamonds, it is crucial to understand the extent to which marketing strategies influence purchasing decisions. This study seeks to address this issue by answering the following research question:

*To what extent do marketing strategies influence consumer purchasing intentions for lab-grown versus natural diamonds in survey-based research, and which individual strategies have the greatest impact?*

To answer this question, this study examines the role of various marketing strategies—such as sustainability messaging, emotional storytelling, and exclusivity—on consumer decision-making. Additionally, it seeks to identify which individual marketing strategies have the most significant influence on purchasing preferences. By exploring these factors, the research aims to provide insights into the effectiveness of different marketing approaches in shaping preferences for natural and lab-grown diamonds. Understanding these influences is essential for marketers and industry stakeholders seeking to align their strategies with evolving consumer values and trends.

An online survey was conducted to collect empirical data from 248 participants. Ensuring a diverse sample was crucial, particularly in terms of demographics such as geographic location and age groups. This approach provided a broad and comprehensive perspective, as preferences for lab-grown and natural diamonds are known to vary significantly across different demographic segments. Some countries are already recognized for favoring one type of diamond over the other, making demographic representation essential for capturing these variations.

To assess the effectiveness of marketing strategies, the survey maintained a consistent comparison framework. Each marketing strategy was presented in the same context for both natural and lab-grown diamonds, allowing respondents to indicate their preferences under identical conditions. This methodological approach ensured that the responses reflected genuine consumer inclinations rather than external influences or differing scenarios. The collected data was analyzed using the statistical software SPSS, which facilitated the examination of relationships between marketing strategies and consumer preferences. The results derived from this analysis provide insights into how marketing influences purchasing intention regarding natural and lab-grown diamonds.

This thesis is structured into seven chapters, beginning with an introduction in Chapter 1, followed by an overview of the research aims and contributions in Chapter 2. Chapter 3 presents a literature review, which explores the distinctions between lab-grown and natural diamonds, examines recent trends in the industry, and discusses key marketing strategies

currently employed. It also highlights how these strategies have evolved over time and introduces the hypotheses tested in this study. Chapter 4 outlines the research methodology, detailing the approach used to evaluate the effectiveness of marketing strategies. The subsequent chapter, Chapter 5, provides an analysis of the collected data, presenting the findings through figures and tables. In Chapter 6, these results are critically examined, interpreted, and connected to the theoretical framework established in earlier chapters. Additionally, this chapter discusses study limitations and their implications. Finally, Chapter 7 offers a conclusion, summarizing the key findings and their relevance within the broader context of the study.

## **2 Contributions and Aims**

The rise of lab-grown diamonds is a relatively new phenomenon, particularly in countries outside the United States, where they are only beginning to gain traction. While existing research explores diamonds, marketing strategies, and consumer behavior, there is a lack of studies that examine the immediate impact of marketing strategies on both natural and lab-grown diamonds in direct comparison. This research seeks to fill this gap by analyzing how different marketing approaches influence purchasing decisions for both types of diamonds and determining which strategies are most effective in promoting either natural or lab-grown diamonds.

Beyond assessing the general impact of marketing strategies, this study aims to identify which specific strategies are most effective depending on the desired consumer outcome—whether the goal is to encourage the purchase of natural diamonds or lab-grown alternatives. This will provide valuable insights into how marketing messages can be tailored to different consumer segments and highlight the key factors that drive decision-making.

Additionally, the study will incorporate cross-examinations of demographic factors to explore whether age, location, income level, and other variables influence purchasing decisions. Understanding how demographic factors interact with marketing strategies will allow businesses to develop more targeted campaigns that align with the preferences and expectations of specific consumer groups. This will also provide insights into which marketing approaches are best suited for different demographics when attempting to encourage the purchase of either type of diamond.

Another key objective is to provide actionable recommendations for diamond retailers and sellers regarding the most effective marketing strategies. This research will help businesses determine which approaches yield the best results, allowing them to refine their advertising and promotional efforts. By incorporating demographic insights, businesses can create highly tailored marketing campaigns that resonate with their target audiences, increasing engagement and conversion rates.

Furthermore, this study will be particularly useful for traditional jewelers and retailers who specialize in natural diamonds but are concerned about losing market share to lab-grown competitors. It will explore how these businesses can leverage marketing to maintain customer

interest and reinforce the value proposition of natural diamonds, despite increasing competition from more affordable lab-grown alternatives. Conversely, new entrants in the lab-grown diamond market can use these insights to understand how to attract consumers, which demographics to target, and which marketing strategies are most effective for positioning lab-grown diamonds as desirable alternatives.

To address these gaps, this survey-based research will provide new insights into several key marketing aspects of the diamond industry. Another objective of the study is to investigate the reasons behind differing consumer choices among similar demographics, particularly focusing on why younger consumers in some countries prefer natural diamonds while others favor lab-grown options. Understanding these differences will offer valuable perspectives on how cultural, economic, and social factors influence consumer behavior across international markets.

A further contribution of this research is to compare the effectiveness of the primary marketing strategies used in the diamond industry. This comparison will be particularly important in evaluating how emotional versus rational appeals and sustainability messaging affect consumer perceptions and purchasing intentions for both natural and lab-grown diamonds.

Finally, the study will examine emerging consumer trends and how they can be integrated into the current diamond marketing landscape. As preferences evolve, it is essential for marketers to stay ahead of trends and adapt their strategies accordingly. This research will explore how these trends influence consumer decisions across different demographic groups and offer practical recommendations for integrating them into diamond marketing strategies.

By addressing these objectives, this research will contribute to a more comprehensive understanding of consumer behavior in the diamond industry and provide valuable insights for businesses seeking to refine their marketing strategies in an increasingly competitive market.

### **3 Literature Review**

#### **3.1. Introduction to the Diamond Market**

##### *Overview of the Industry*

The global diamond market has existed for more than 2000 years with the Silk Road connecting India and China recording some of the earliest known trading routes (White, 2024). India was considered the only source of natural diamonds until the turn of the 18<sup>th</sup> century when discoveries were made in South America and Africa. Due to the rarity of natural diamonds in the early days, marketing was via word of mouth and they were a preserve of the elite. DeBeers which is currently the second-largest diamond mining company by market share introduced natural diamonds to the mass market with the marketing phrase "A diamond is forever" in 1947 (Francis-Tan and Mialon, 2014). The marketing campaign was a success and it is credited to the adoption of natural diamonds which make up more than 70% of the wedding and engagement rings.

Lab-grown diamonds on the other hand have a shorter history with the first production done by General Electric in the 1950s but it took more than three decades before they became commercially available. Lab-grown diamonds currently have more than 14% market share and their success is credited to the rise of a young generation of environmentally conscious customers. The diamond market is valued at more than \$95 billion and it is expected to exceed \$130 in this decade (Fortune Business Insights, 2024).

##### *Scope of the Review*

This literature review analyzes marketing and how it influences customer purchasing intentions in the natural and lab-grown diamond luxury market. Lab-grown diamond marketing campaigns lean towards mainstream media and digital marketing since they have gained traction in the last two decades (Philippe, Caroline and Alane, 2021). Natural diamonds on the other hand stick to traditional marketing strategies like word of mouth and storytelling which aligns with a broader strategy of retaining exclusivity (Shukla et al., 2022).

The literature review explores various marketing strategies used by natural and lab-grown diamond companies and the underlying market trends they align with. Marketing strategies

focus on consumer concerns such as the environmental impact of mining natural diamonds and common misconceptions such as the inauthenticity of lab-grown diamonds. After the analysis, the research gaps in the current literature are identified with the view of providing insights through survey-based research.

### **3.2. Marketing Strategies for Diamonds**

#### *Exclusivity*

Marketing strategies are largely driven by the current consumer trends but exclusivity emerged from a historical context where natural diamonds were difficult to mine. According to Wang, Sung and Phau (2024), exclusivity is a major determinant in the pricing of luxury products like jewelry and hence one of the most effective marketing strategies (Wang, Sung and Phau, 2024). The first recorded instance of using diamonds for wedding rings was in the 1400s with only the elite being the target market since they were rare and expensive. Such natural rarity supersedes artificially induced rarity which places natural diamonds at an advantage compared to lab-grown diamonds which can be mass-produced. Vladislav Zhdanov et al. (2024) established similar findings where customers were willing to pay a premium for rare and exclusive diamond collections (Vladislav Zhdanov et al., 2024). Vladislav Zhdanov et al. (2024) further established that despite lab-grown diamonds being up to 30% cheaper than natural diamonds, they are unlikely to dominate the luxury market since they are not rare. The studies connect rarity and perceived social status which drives consumers to pay a premium for natural diamonds.

An alternative view emerges from the research conducted by Cheah, Shimul and Parker (2021) where they find that an emerging market segment of luxury goods consumers are more concerned by sustainability than the rarity of the pieces they purchase (Cheah, Shimul and Parker, 2021). The research traces the change in consumer trends to the COVID-19 pandemic period hence lab lab-grown diamonds' future may be better than what Vladislav Zhdanov et al. (2024) had predicted.

One area with inadequate research is enforcing artificial rarity for lab-grown diamonds with blockchain technology proposed as a viable solution (Udokwu et al., 2023). According to Udokwu et al. (2023), blockchain technology enforces contracts and is being adopted in the

luxury products market with great success. Customers will hence be assured of the rarity of lab-grown diamonds they purchase when their uniqueness is enforced by a blockchain contract. Blockchain authentication reduces overheads since you no longer require diamond experts during transactions, especially in the resell market. Cheah, Shimul and Parker (2021) fail to address the risk of environmentally conscious customers abandoning the luxury products markets and instead assume that they will pivot to products like lab-grown diamonds. Lab-grown diamonds are not always environmentally friendly as depicted in the marketing narratives as they sometimes consume more power in their production than natural diamonds (Vladislav Zhdanov et al., 2024).

### *Ethical Sourcing*

Highlighting the ethical sourcing of diamonds is a marketing trend that emerged as a geopolitical necessity in the 1990s due to natural diamond mines having dangerous working conditions and financing civil wars, especially in the African continent (Schulte, Balasubramanian and Paris, 2021). The Kimberly process was initiated under the guidance of the United Nations to ensure diamonds are ethically sourced and do not fuel conflicts. The initiative has over 70 countries as signatories with more than 99% of natural diamonds certified as conflict-free (Linda, 2023).

Marketers use this certification as one of their main selling points, especially to environmentally conscious customers. Diamond retailers provide elaborate information about how the diamonds move from the mine to the market while highlighting positive initiatives for empowering local communities (Sun, Jiang and Wang, 2024). Lab-grown diamond marketers counter this strategy by highlighting the flaws of ethical certification. They highlight the conflict of interest that exists in various diamond certification organizations while insisting that the only way to ensure ethical sourcing is by purchasing lab-grown diamonds.

### *Emotional Storytelling*

Third is emotional storytelling which is a marketing technique that is as old as mankind with De Beers coining the phrase “A diamond is forever” to tap into this timeless strategy (Shields and Shields, 2021). Studies suggest that more than 70% of all purchasing decisions happen when there is an emotional connection (BrighterClick, 2023; Ignite Sales, 2020). De Beers is

the second largest diamond retailer controlling over 25% of the global diamond trade with emotional storytelling largely credited for this success. Today emotional storytelling is gradually migrating to digital spaces like social media platforms like Instagram and YouTube which showcase diamond engagement photos and videos. Adopting modern methods increases the reach of diamond marketing companies but also threatens to dismantle the exclusivity element (Yin et al., 2023).

Lab-grown diamonds have a much shorter history hence they pivot to highlighting their ecofriendly nature compared to natural diamonds in emotional storytelling. Augmented reality is another technology aspect that compliments emotional storytelling with customers getting a virtual tour of the features and manufacturing process of diamonds. De Beers adopted augmented reality more than a decade ago and several lab-grown diamond companies from China have incorporated the trend in emotional storytelling.

### *Innovation*

Lastly, the discovery of more mines and the emergence of more players in the global diamond market necessitated rapid innovation for the pioneer companies to survive. De Beers controlled more than 90% of the market a century ago but emerging innovations in the diamond industry have now pushed its market share to below 30% (Siegel, Spapens and van Uhm, 2020). The Russian diamond mining company ALROSA highlights innovative technology in its marketing used in creating unique sets of rough diamonds (White, 2024).

Lab-grown diamonds however are the most innovative since they have revolutionized the entire industry and threatened to depose companies like De Beers which has enjoyed market leadership for decades. Marketers highlight the innovative nature of lab-grown diamonds as customers can order custom designs to be produced (Sun, Jiang and Wang, 2024). Millennials in emerging markets like India and China are impressed by the innovation and are switching to lab-grown diamonds in large numbers. Lab-grown diamonds currently have more than 13% market share and are projected to dominate the jewelry market within a decade. Natural diamond companies must develop innovation vectors to avoid being eclipsed by lab-grown diamonds which are mainly produced in China.

### **3. 3. Consumer Behavior in the Diamond Market**

#### *Consumer Preferences*

Consumer behavior in the diamond market is driven by a variety of factors with luxury value being most prominent. The first use of diamonds on a wedding ring was in 1477 which ushered in a new trend by the wealthy class which has been preserved to date (Hughes, 2021). The luxury value attached to the diamonds blended with the emotional significance of a wedding which is one of the happiest occasions in most cultures. At the inception of the diamond market, the high cost symbolized the commitment of the groom to marriage while other elites started using natural diamonds as a store of value (Philippe, Caroline and Alane, 2021). Diamonds have increased by more than 14% annually in value for the last 50 years hence they serve as a good store of value with a carat jumping from \$2,700 in 1960 to more than \$30,000 in 2016 (Jaganmohan, 2024). In the early days, science had not demystified the process of forming natural diamonds which further justified the high price tag. As more diamond mines were discovered the price decreased but they remain a priced item that ordinary people cannot afford.

The ruling elite used diamonds to symbolize power with ancient Egyptians and Europeans adorning diamonds on their crowns (Malhotra, 2024). The tradition by the ruling elite has been retained with Britain's crown estimated to have diamonds worth more than \$4 billion. Lab-grown diamonds on the other hand are democratizing ownership with one carat retaining for less than \$1000 which excludes its use as a store of value (Butcher, 2024). Lab-grown diamonds still retain the luxury value and emotional significance among young consumers but the majority of older consumers prefer natural diamonds. Various studies suggest that the consumption shift from natural to lab-grown diamonds is largely driven by demographic shifts rather than marketing campaigns.

#### *Ethical and Environmental Concerns*

Ethical and environmental concerns in the diamond industry have undergone a rapid evolution over the past two decades. In the 1990s ethical marketing campaigns focused on the use of diamonds in unstable countries to fuel conflicts with most initiatives led by countries and multinational organizations like the United Nations (Schulte, Balasubramanian and Paris, 2021). Most diamond customers become aware of the harm perpetuated in some countries due

to awareness campaigns which then prompted companies to adopt ethical practices. Customers are today more informed and ethically concerned hence initiating the demand for ethically sourced diamonds. Despite adopting global standards of ethical sourcing, natural diamond companies are struggling to retain the young demographic that is drifting toward lab-grown diamonds (Ma et al., 2022). Lab-grown diamonds have positioned themselves as the only jewelry that can claim to be ethically sourced since no mining is involved. China is leading in both the production and consumption of lab-grown diamonds with the global annual growth rate exceeding 13%.

Carbon emissions are another major area of environmental concern with both natural and lab-grown diamonds facing scrutiny from customers (Tenuta et al., 2024). It is easier to track the carbon emissions of lab-grown diamonds hence they are preferred by ethically conscious customers. Natural diamonds on the other hand have embarked on elaborate marketing campaigns of comparing their carbon emissions to that of lab-grown diamonds. In some instances, natural diamonds have lower carbon emissions than lab-grown diamonds but tracking the supply chain consumes a lot of resources and ends up being an additional cost for customers (Bataleva and Palyanov, 2023). The lab-grown diamond supply chain is easier to explain to customers hence their market share will continue to grow despite natural diamonds' efforts to reduce carbon emissions.

### *Price Sensitivity*

Price is a major determinant when choosing between natural and lab-grown diamonds with the latter being up to 90% cheaper (Butcher, 2024). Lab-grown diamonds are hence suitable for mass marketing although that risks diminishing the historical prestige. The younger demographic in India and China has fully embraced lab-grown diamonds due to their affordability even for customers who don't have ethical concerns. China has the largest middle class globally with more than 300 million which makes it impractical to avail enough natural diamonds to fulfill its demand. Lab-grown diamond production can be scaled on demand and fulfill the prevailing market needs hence its popularity will increase (Xu, 2024). The lower price point of less than \$1000 for lab-grown diamonds makes it a less consequential purchase, especially in the developed countries in Europe and the United States. The affordability of lab-grown diamonds encourages repeat purchases from a large number of consumers hence the annual growth of more than 12%.

The majority of the developed countries have been facing a decline in the purchasing power and numbers of the middle class (Elhefnawy, 2022). In the United States, the middle class has reduced by more than 10% since 1971 hence the gradual decline of natural diamond purchases. The shift to marketing lab-grown diamonds is a more practical approach than attempting to capture a saturated and shrinking market. In Germany, the average disposable income per household is slightly above \$900 per month which is enough to purchase one lab-grown diamond (Bartels and Morelli, 2020). The same household would have to save for a year to afford a natural diamond which is enough time to shift some of the consumer base to lab-grown diamonds. A survey in the United States set \$1000 as the price limit that customers are willing to pay for lab-grown diamonds which aligns with the monthly disposable income in most developed countries (Butcher, 2023).

### **3. 4. Consumer Perceptions and Market Trends**

#### *Awareness and Misconceptions*

The diamond industry is plagued with numerous misconceptions and low awareness levels in some demographics which hinder the effectiveness of marketing campaigns. Lab-grown diamonds are experiencing strong market growth with the United States leading with over 60% annual growth over the past three years (Treadgold, 2024). The growth indicates an awareness of lab-grown diamonds although natural diamonds take precedence when customers can afford them. Synthetic diamonds are a synonym for lab-grown diamonds which some customers misconstrue to mean that they are fake. The sentiment is reflected in one study that was commissioned by De Beers in the United States where 47% of respondents claimed that lab-grown diamonds are not real (Bates, 2021). The survey further indicated a decline in consumers who believe that lab-grown diamonds are more environmentally friendly. The low prices of diamonds made them less appealing for romantic occasions in the United States which contradicts the position of young people in India and China who use lab-grown diamonds for weddings and engagements.

The failure of lab-grown diamonds to retain value is an emerging concern that is diminishing their appeal with one consumer survey recording more than a 50% decline in value within two

years of purchase (Marquis, 2024). The diamond companies attribute the reduction in prices to changing market dynamics since lab-grown diamonds are increasing in popularity. In the United States, awareness of lab-grown diamonds increased from 9% in 2010 to more than 50% in 2018 across all age groups (Southern Jewelry News, 2022). The increase enables lab-grown producers to leverage the economies of scale hence the decline in price in the recent three years. Technological advancements have made lab-grown diamonds indistinguishable from natural diamonds even in terms of quality which the retailers hope will fuel future market growth. In a recent survey, more than 65% of millennials in the United States acknowledged awareness of lab-grown diamonds hence their acceptance may match the levels in India and China shortly (Sabanoglu, 2024).

### *Perceived Scarcity and Authenticity*

Diamond's perceived scarcity and authenticity is an aspect that differs greatly across different countries and demographics hence it affects marketing campaigns. Diamonds gained their current popularity a century ago when De Beers commissioned the first large-scale mine in South Africa (Véronique Pouillard, 2024). Sapphire and ruby were the most popular jewelry and it was globally accepted that diamonds were too scarce and a reserve of the elite. De Beers targeted the upper middle class with its initial marketing campaigns in the 1950s using famous actors like Marlin Monroe (Wexler, 2019). More diamond mines were discovered in the former Soviet Union and South America but they were barely enough to sell to the middle class hence they remained a scarce and pricy item. Diamonds became a favorite option for wedding anniversary rings in the Soviet Union and couples would save for years to afford a single purchase.

Despite their scarcity, there have been challenging practices of De Beers and other diamond mining companies. De Beers was convicted for price fixing diamonds in a United States federal court in 2004 which made the larger consumer market question the real scarcity of diamonds. De Beers also holds a large stockpile of uncut diamonds and there are fears that they could flood the market in the future and collapse the prices of natural diamonds. Despite these concerns, natural diamond prices have gradually increased since the 1960s hence serve a good store of value and the revenue continues to grow (Statista Research Department, 2016).

Authenticity is a far more technical aspect for customers to gauge with their naked eyes hence they rely on certifications of retailers, miners and producers of natural and lab-grown diamonds. The United States Federal Trade Commission in 2018 ruled that natural and lab-grown diamonds have the same chemical composition hence the latter should not be regarded as synthetic (Danziger, 2018). The declaration reassured customers of the authenticity of lab-grown diamonds and is set to boost sales in the United States where there is more affinity for natural diamonds even among the younger consumers. Consumers have had to contend with limited information on the scarcity and authenticity of diamonds since the global diamond market is controlled by a few companies. Most of the research is commissioned by diamond companies which causes a conflict of interest (Véronique Pouillard, 2024). More independent studies are required to allay consumer fears of authenticity and establish a better understanding of the scarcity of diamonds globally.

### *Emerging Trends*

Sustainability is one of the most significant emerging trends in the global economy and the diamond market in particular (McKinsey & Company, 2023). In a 2022 consumer survey commissioned by McKinsey & Company, more than 60% of consumers were willing to pay more for goods that align with sustainability goals. Lab-grown diamonds are uniquely positioned to capture the expanding sustainability-conscious market since their products cost less than natural diamonds. Natural diamond's profit margins are preserved since the consumers won't mind bearing the additional cost resulting from sustainability efforts and ethical operations in mines and the supply chain.

Another emerging trend is minimalism which gained traction during the COVID pandemic. Minimalist jewelry is worth more than \$10 billion and is expected to grow at an annual rate of more than 8% (Gomelsky, 2022). The trend will enable lab-grown diamonds to become more acceptable since it encourages consumers to reduce the focus on the size and value of jewelry. Natural diamonds can also tap into new markets by offering affordable products to consumers who wouldn't normally purchase jewelry but find smaller pieces more acceptable.

Branded diamonds have risen in popularity among Gen Z consumers accounting for more than 70% of purchases with this demographic (Diamond Insight Report, 2022). The trend differs from that of the older consumers who are less attached to brands and only focus on the quality of the diamonds. Lastly, younger consumers are increasingly shifting to online purchases of

diamonds which represent more than 30% of all sales in the United States (Philippe, Caroline and Alane, 2021). If the trend continues, traditional diamond retail stores are likely to be faced out within a decade. The online shopping diamond experience is incorporating new trends like the metaverse which presents new revenue-generating avenues that are yet to be explored.

### **3. 5. Research Gaps and Relevance**

The studies highlighted in this literature review leave several important questions unanswered, which underscore the need for further research.

#### *Cross-Cultural Differences in Consumer Preferences*

The first major gap concerns the lack of clarity on why consumer choices differ among similar demographics in different countries. For instance, while the young demographic in India and China exhibits a high affinity for lab-grown diamonds, the same group in the United States tends to prefer natural diamonds (Chew, 2024). This demographic disparity raises important questions about the underlying factors influencing these preferences. It remains unclear whether cultural, economic, or environmental considerations play a more significant role. Understanding these cross-cultural differences in diamond preferences is crucial for global marketers aiming to effectively target diverse consumer bases.

#### *Impact of Marketing Strategies on Consumer Decision-Making*

Another research gap lies in the limited studies exploring how various marketing techniques—such as the type of marketing appeal (emotional vs. rational) and the emphasis on sustainability—influence consumer choices. While sustainability has become a key factor for many consumers, particularly among younger generations, existing research lacks depth in analyzing how specific sustainability-focused marketing strategies impact purchasing decisions. Most available studies focus on broader sustainability trends but do not provide detailed insights into how sustainability messaging is perceived specifically in the diamond industry, particularly when comparing lab-grown and natural diamonds.

#### *Industry Influence and Potential Bias in Consumer Research*

Another area of concern is that many consumer trend studies are commissioned by major industry players, which can introduce a conflict of interest in the findings. These studies may

not always represent an unbiased perspective on consumer behavior and preferences, particularly when industry stakeholders have vested interests in promoting one type of diamond over another. This limitation in available research highlights the need for independent studies that can offer objective and neutral insights into consumer choices.

#### *Comparative Analysis of Marketing Strategies for Lab-Grown and Natural Diamonds*

A further research gap is the lack of comparative studies analyzing the marketing strategies for lab-grown and natural diamonds, particularly in relation to emerging trends such as minimalist jewelry consumption. While some research exists on the market positioning of diamonds, few studies have examined how marketing strategies differ between lab-grown and natural diamonds, especially given evolving consumer preferences for simplicity and sustainability in jewelry. The rise of minimalist aesthetics (Natural Diamond Council, 2024), combined with the growing popularity of lab-grown diamonds, presents a unique opportunity to study how these trends shape marketing strategies and consumer purchasing behaviors.

#### *Influence of Demographic Factors on Diamond Marketing*

Lastly, there is limited research on how demographic factors such as income level, education, and geographical location affect the marketing of diamonds. While demographic features are often acknowledged in consumer studies, the direct impact of income levels on purchasing decisions in the diamond market—particularly in the context of lab-grown versus natural diamonds—remains underexplored. Understanding how retailers can tailor their marketing strategies based on income and other demographic factors would enable them to optimize their marketing mix and better meet the needs of their diverse customer base.

### **3.6. Hypothesis**

Building upon the findings of the literature review, several marketing strategies have been identified as key drivers influencing consumer purchasing intentions. These strategies include exclusivity, emotional storytelling, innovation, ethical sourcing, and the incorporation of emerging trends. Within this study, these approaches are collectively referred to as marketing strategies.

While previous research suggests that marketing plays a crucial role in shaping consumer preferences, it remains unclear whether these strategies have a stronger impact on lab-grown diamonds compared to natural diamonds. Given the distinct characteristics of lab-grown diamonds, such as their ethical sourcing and technological innovation, marketing strategies may resonate differently with consumers depending on the diamond type.

To investigate this relationship, the following hypotheses are proposed:

#### **H1 (Alternative Hypothesis)**

*Marketing strategies influence consumer purchasing intentions for lab-grown diamonds more than for natural diamonds.*

This hypothesis suggests that marketing strategies tailored to the unique attributes of lab-grown diamonds, such as their ethical appeal and technological advancements, may be more effective in shaping consumer preferences, thereby leading to higher purchase intentions for lab-grown diamonds.

#### **H0 (Null Hypothesis)**

*Marketing strategies do not significantly differ in their influence on consumer purchasing intentions for lab-grown and natural diamonds.*

This hypothesis suggests that marketing influences both lab-grown and natural diamonds equally, without significantly favoring one over the other.

## **4. Methodology**

### **4.1. Research Methodology Overview**

#### *Quantitative Research Approach*

In order to evaluate the research question and test the associated hypothesis, a quantitative approach was chosen. This methodology was selected because it allows for the analysis of data from a large sample, as well as the gathering of standardized responses (Phakiti, 2015). These attributes were crucial to the aims of this study. Additionally, quantitative research is ideal for addressing a wide array of questions and can demonstrate clear cause-and-effect relationships (Gunter, 2002). The ability to compare different variables is an essential aspect of this study's analysis, making this approach particularly suited to meet one of the key objectives.

Another advantage of using quantitative research is its capacity to quantify behaviors, patterns, and trends, enabling the research to make generalizations based on a broader population. This aligns with the goal of uncovering patterns that relate to marketing strategies and purchasing intentions concerning lab-grown versus natural diamonds. Statistical and mathematical techniques were employed to interpret the data and derive meaningful conclusions (Phakiti, 2015).

#### *Data Collection Method*

Descriptive data were collected to explore the potential correlation between various marketing strategies and consumers' purchasing behaviors for both lab-grown and natural diamonds. To address the hypothesis, only primary research was conducted, as the study's data were not based on pre-existing research. The primary data were collected via an online survey (see Appendix A).

Security and confidentiality were paramount during data collection. The researcher was the sole individual with access to the data, which will be deleted upon completion of the study. The survey itself was administered using the Quadrics® platform. The survey link was then shared with participants.

#### *Survey Design and Distribution*

The survey had an average completion time of approximately four minutes, with participation being entirely voluntary and anonymous. It was primarily disseminated through various social media platforms. There were no restrictions based on demographic characteristics, allowing individuals from a broad spectrum of backgrounds to take part. Consequently, aspects such as age, gender, geographic location, profession, relationship status, and educational attainment were not used as exclusion criteria. This approach facilitated the collection of data from a diverse pool of respondents rather than a narrowly defined segment of the population. However, the online nature of the survey required participants to have a certain level of technological proficiency, inherently excluding those with limited access to or familiarity with digital tools. As a result, the findings may not be fully representative of the general population. Furthermore, since the survey was administered in English, only individuals with sufficient language proficiency were able to participate, which further limited the scope of potential respondents.

#### *Survey Duration and Participation Rate*

The online questionnaire was available from 20 December 2024 to 24 January 2025. During this period, 248 individuals clicked the survey link, with 247 completing the survey. This resulted in a participation rate of 99.6%.

#### *Data Cleaning and Preparation*

Prior to analyzing the collected data, it was first organized and cleaned. Incomplete, irrelevant, or contradictory responses, along with any trial entries, were excluded. Data points that fell outside the expected range were classified as outliers and removed from the dataset. A detailed list of these modifications can be found in Appendix B. After preparing the data, 213 valid responses were included in the final analysis, and the dataset was coded according to the codebook (see Appendix B).

#### *Data Analysis Approach*

The data analysis was conducted using SPSS statistical software, which was employed to evaluate the research hypothesis. A linear regression analysis was performed, with the independent variable representing the overall effectiveness of marketing strategies, derived from the eight different strategies tested. The dependent variable measured participants' overall

likelihood of purchasing lab-grown diamonds or natural diamonds, based on responses to eight survey questions. The analysis aimed to identify and interpret the relationships between variables, providing insights into the impact of marketing strategies on consumer purchasing behavior and ultimately testing the validity of the hypothesis.

## **4.2. Marketing Strategy Testing**

### *Overview of Marketing Strategy Analysis*

This study explores the impact of marketing strategies on consumer purchasing behavior with a focus on lab-grown versus natural diamonds. To evaluate these effects in a structured and meaningful way, the general concept of “marketing strategies” was divided into eight distinct categories. These categories were selected for their relevance to the diamond market and their potential to influence consumer decision-making.

By subdividing the broader topic into specific strategies, the study ensures a focused analysis of each factor’s role in shaping preferences. This approach allows for a more detailed examination of marketing strategies, providing insights into not only their overall impact but also their relative effectiveness. For instance, some strategies may resonate strongly with certain consumer groups, while others may have little to no effect, highlighting variations in their influence.

To capture these dynamics, each strategy is tested through tailored questions designed to probe consumer preferences, attitudes, and purchase intentions. These questions are phrased to provide reliable and actionable data, enabling the study to assess both the immediate and broader implications of these strategies. The results will reveal how each strategy interacts with consumer perceptions and whether specific strategies are particularly effective in swaying purchasing behavior.

The questionnaire is structured to evaluate each marketing strategy both independently and in the context of others. This dual approach ensures a comprehensive analysis of how consumers prioritize different factors when considering diamond purchases. By isolating the effects of each strategy and examining their interplay, the study aims to provide a nuanced understanding of the decision-making process in this unique and competitive market.

### *Selected Marketing Strategies*

The eight marketing strategies examined in this research are:

1. **Price:** Focuses on affordability and perceived value for money.
2. **Eco-Friendliness:** Highlights the environmental benefits of lab-grown diamonds over mined diamonds.
3. **Emotional Appeal:** Emphasizes the traditions, milestones, and symbolic meanings associated with diamonds.
4. **Luxury and Prestige:** Links natural diamonds to high-end branding, rarity, and exclusivity.
5. **Customization:** Promotes the flexibility and personalization of lab-grown diamonds to suit individual preferences.
6. **Celebrity Influence:** Leverages endorsements and status symbols associated with natural diamonds.
7. **Ethical Sourcing:** Addresses sustainability and social responsibility by contrasting the ethical production of lab-grown diamonds with the environmental and social concerns of traditional mining.
8. **Promotions:** Encourages consumer action through time-sensitive offers or discounts.

### **4.3. Data Collection Tool: Questionnaire Structure and Purpose**

#### *Survey Structure*

The questionnaire is structured into multiple sections, each designed to assess a specific aspect of the marketing strategies under investigation. This structured approach allows for both a broad analysis of the general influence of marketing strategies and a detailed comparison of

#### *Survey Sections:*

##### *1. Awareness*

The first section of the questionnaire focuses on gauging participants' familiarity with diamonds and their purchasing history. Respondents are asked whether they have ever purchased a diamond, with options distinguishing between natural and lab-grown diamonds.

They are also queried about their knowledge of the differences between lab-grown and natural diamonds. This section serves to establish participants' backgrounds in terms of diamond purchasing experience and awareness, providing critical context for analyzing their responses. By segmenting participants based on prior knowledge and experience, the study can better evaluate how these factors influence the effectiveness of various marketing strategies.

## *2. Preference Testing*

The second section examines participants' purchasing preferences, both before and after exposure to the marketing strategies presented in the questionnaire. Initially, respondents are asked which type of diamond they would likely purchase if they were to buy one at that moment. A similar question is repeated at the end of the questionnaire to determine whether their preferences shift after engaging with the various marketing strategy prompts. This comparative approach offers insights into the direct impact of the marketing messages on participants' perceptions and decision-making processes.

## *3. Decision-Making Criteria*

This section delves into the factors that participants prioritize when choosing a diamond. Respondents are asked to rank attributes such as appearance, affordability, eco-friendliness, emotional significance, and brand reputation in order of importance. For example, participants may evaluate whether the beauty of a diamond or its affordability holds greater significance in their decision-making. Additional context is provided through a statement highlighting that lab-grown diamonds look identical to natural diamonds but cost significantly less. By examining how respondents rank these attributes, this section offers valuable insights into the underlying considerations that drive consumer preferences. It also contextualizes the significance of specific marketing strategies in shaping purchasing behavior.

## *4. Likert Scale Questions for Marketing Strategies*

The final section of the questionnaire uses Likert-scale questions to assess the perceived effectiveness of each of the eight marketing strategies. Each strategy is represented by a tailored statement designed to elicit participants' likelihood of purchasing a diamond based on the given messaging.

- **Price:** Participants evaluate a statement emphasizing the affordability of lab-grown diamonds, which are described as being identical in appearance to natural diamonds but costing significantly less. This question measures the impact of cost savings on consumer preferences.
- **Eco-Friendliness:** A statement highlights the environmental benefits of lab-grown diamonds, noting that they avoid the environmental harm caused by mining. This tests whether eco-conscious messaging motivates purchasing decisions.
- **Emotional Appeal:** The emotional resonance of natural diamonds is explored through a statement framing them as timeless symbols of love and tradition, with the iconic phrase “a diamond is forever.” This question investigates the role of emotional significance in influencing consumer preferences.
- **Luxury and Prestige:** A statement associates natural diamonds with high-end brands, rarity, and exclusivity. This evaluates the extent to which the luxury and prestige of natural diamonds affect purchasing decisions.
- **Customization:** Lab-grown diamonds are promoted as highly customizable, with advanced technology allowing them to be tailored to individual preferences. This question examines whether the potential for personalization appeals to consumers.
- **Celebrity Influence:** A statement highlights the endorsement of natural diamonds by celebrities, portraying them as symbols of elegance and exclusivity. This question assesses the impact of celebrity influence on consumer choices.
- **Ethical Sourcing:** The ethical advantages of lab-grown diamonds are emphasized through a statement that contrasts their production process with the environmental and social challenges of traditional mining. This tests whether ethical considerations sway purchasing preferences.
- **Promotions:** Finally, the effectiveness of time-sensitive offers is evaluated through a statement about natural diamonds being sold at a special discount for a limited time. This measures whether urgency-based marketing influences consumer behavior.

##### 5. *Demographic Information*

The final section of the questionnaire collects demographic data from participants, including their gender, age, annual income, and place of residence. Participants are asked to indicate:

- Their gender, with options including male, female, non-binary/third gender, and prefer not to say.
- Their age, segmented into groups ranging from under 18 to 65 and older.
- Their annual income, with options spanning from less than 20,000 to 120,000 or more.
- Their current place of residence, categorized as Italy, Germany, other European countries (with a prompt to specify), or non-European countries (with a prompt to specify).

### *Role of Demographics in Consumer Behavior Analysis*

This section is critical for contextualizing the results of the survey. Understanding demographic factors allows for the identification of patterns and trends within specific population segments. For instance, age or income levels may influence how participants prioritize marketing strategies, while geographic location could impact preferences due to cultural or regional differences.

Including demographic data ensures that the findings can be analyzed with greater depth and specificity. It also facilitates the segmentation of results, enabling comparisons across different groups and providing a richer understanding of how marketing strategies affect diverse consumer profiles.

By organizing the questionnaire into these sections and incorporating targeted questions for each marketing strategy, this study provides a robust framework for evaluating how different strategies influence consumer preferences. The inclusion of demographic questions enhances the analysis by allowing for the exploration of nuanced patterns across various population groups, ensuring that the study's findings are both comprehensive and actionable.

## 5 Results

This chapter presents the findings from various analyses examining the impact of marketing strategies on purchase intention for lab-grown versus natural diamonds.

The first section provides descriptive statistics of the sample used in the analysis, along with an overview of participants' awareness of the topic. The second section covers crosstabulations, followed by a frequency analysis in the fourth section, which examines consumer likelihood to purchase lab-grown versus natural diamonds across different marketing strategies. Hypothesis testing is addressed in the fifth section, beginning with an assessment of the necessary assumptions. Subsequently, each of the eight marketing strategies is individually evaluated for its effectiveness. This is followed by an analysis of the overall impact of marketing strategies. Control variables are then identified, and finally, the hypotheses are re-tested with the inclusion of these control variables to refine the analysis further.

### 5.1. Results Demographics

The demographic characteristics of the survey respondents provide insights into the sample composition.

#### *Gender Distribution*

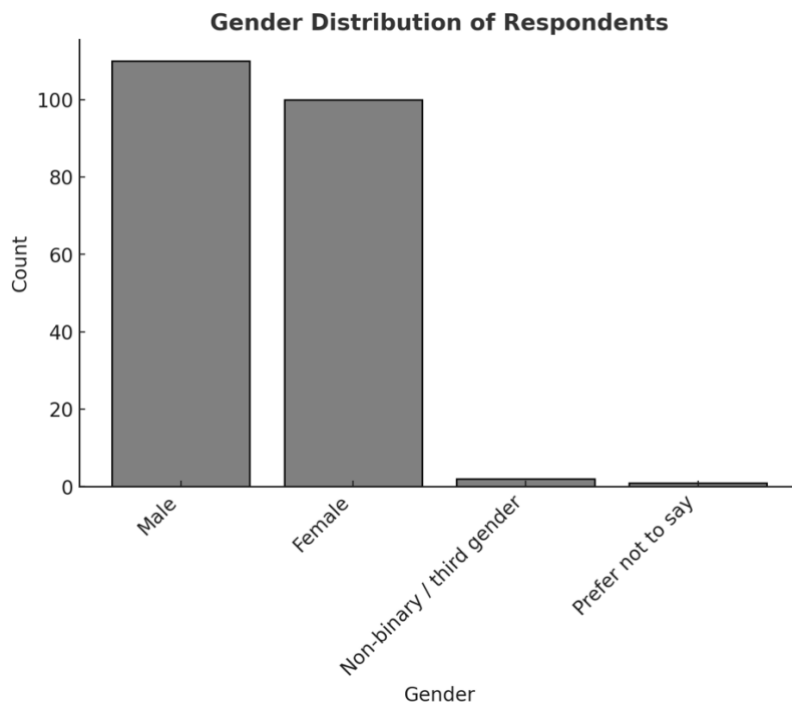
The survey collected responses from 213 participants regarding their gender identity. The majority of respondents identified as male (51.6%), followed closely by female respondents, who made up 46.9% of the sample. A small proportion of participants (0.9%) identified as non-binary or third gender, while 0.5% preferred not to disclose their gender.

*Table 1 Gender Distribution of Respondents (N = 213)*

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	110	51.6%
Female	100	46.9%
Non-binary / Third Gender	2	0.9%
Prefer not to say	1	0.5%

*Note. The majority of respondents identified as male or female, with a small percentage identifying as non-binary or preferring not to disclose their gender.*

Figure 1 Gender Distribution



(Bar chart illustrating the gender breakdown of respondents.)

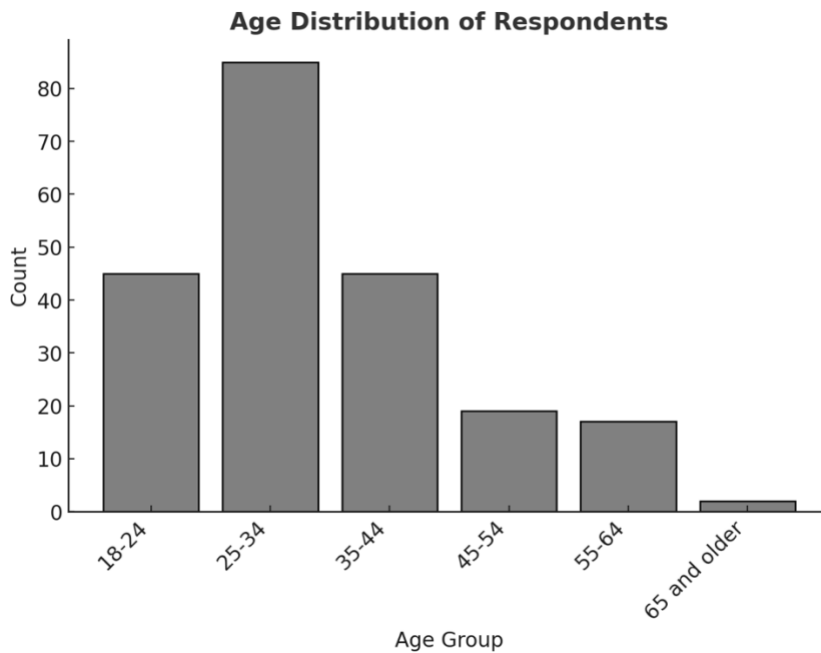
### Age Distribution

The age distribution of respondents is as follows: the largest group is in the 25-34 age range, comprising 39.9% of the sample. The 18-24 and 35-44 age groups each make up 21.1%. Smaller proportions belong to the 45-54 (8.9%), 55-64 (8.0%), and 65 and older (0.9%) categories. This suggests that most participants are between 18 and 44 years old, with fewer respondents in older age categories.

Table 2 Age Distribution of Respondents (N = 213)

Age Group	Frequency	Percent
18-24	45	21.1%
25-34	85	39.9%
35-44	45	21.1%
45-54	19	8.9%
55-64	17	8.0%
65 and older	2	0.9%

Figure 2 Age Distribution



Bar chart illustrating the age distribution of respondents.

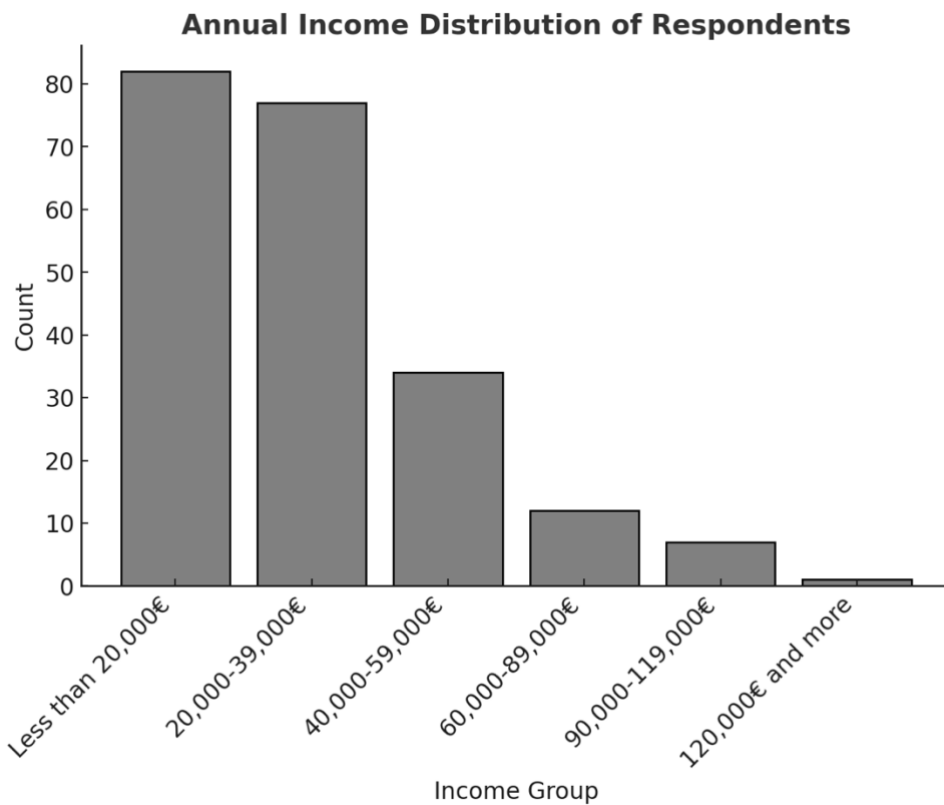
### Income Distribution

The annual income distribution of respondents shows that the largest group earns less than 20,000€, accounting for 38.5% of the sample. This is followed closely by those in the 20,000-39,000€ range, representing 36.2%. Smaller groups fall into the higher income brackets: 40,000-59,000€ (16.0%), 60,000-89,000€ (5.6%), 90,000-119,000€ (3.3%), and 120,000€ and more (0.5%).

Table 3 Annual Income Distribution of Respondents (N = 213)

Income Bracket	Frequency	Percent
Less than 20,000€	82	38.5%
20,000-39,000€	77	36.2%
40,000-59,000€	34	16.0%
60,000-89,000€	12	5.6%
90,000-119,000€	7	3.3%
120,000€ and more	1	0.5%

Figure 3 Income Distribution



(Bar chart illustrating the income distribution of respondents.)

### Location Distribution

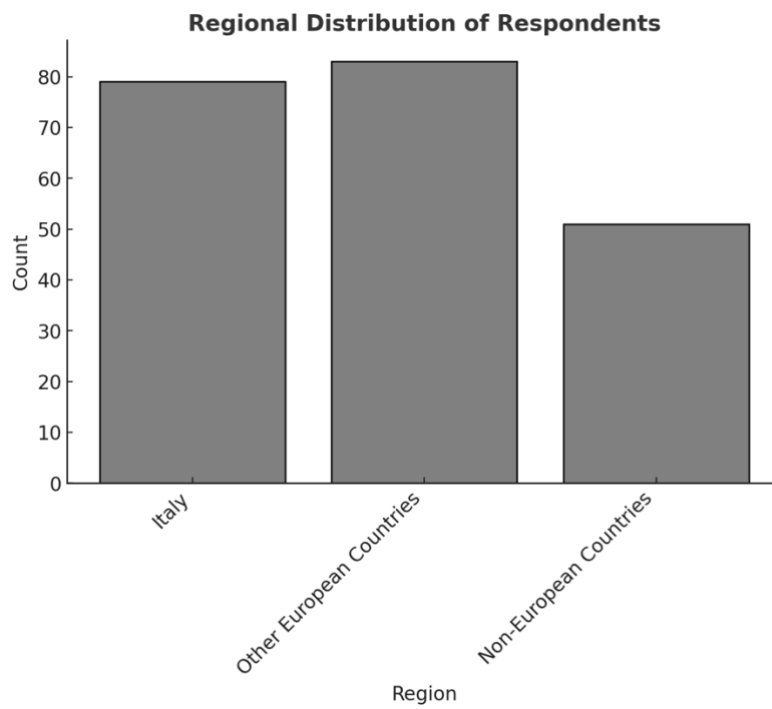
The survey includes 213 respondents, with the majority (76.1%) residing in Europe. Among them, 39.0% live in Other European Countries, while 37.1% are based in Italy. A smaller but significant 23.9% of respondents live outside Europe.

Table 4 Current Location of Respondents (N = 213)

Location	Frequency	Percent
Italy	79	37.1%
Other European Countries	83	39.0%
Non-European Countries	51	23.9%

The survey includes respondents from a diverse range of countries. Italy has the largest representation (35.7%), followed by South Africa (20.7%) and the UK (15.0%). Other notable countries include Poland (6.6%), Portugal (7.0%), Greece (3.8%), and Spain (3.3%).

Figure 4 Location Distribution

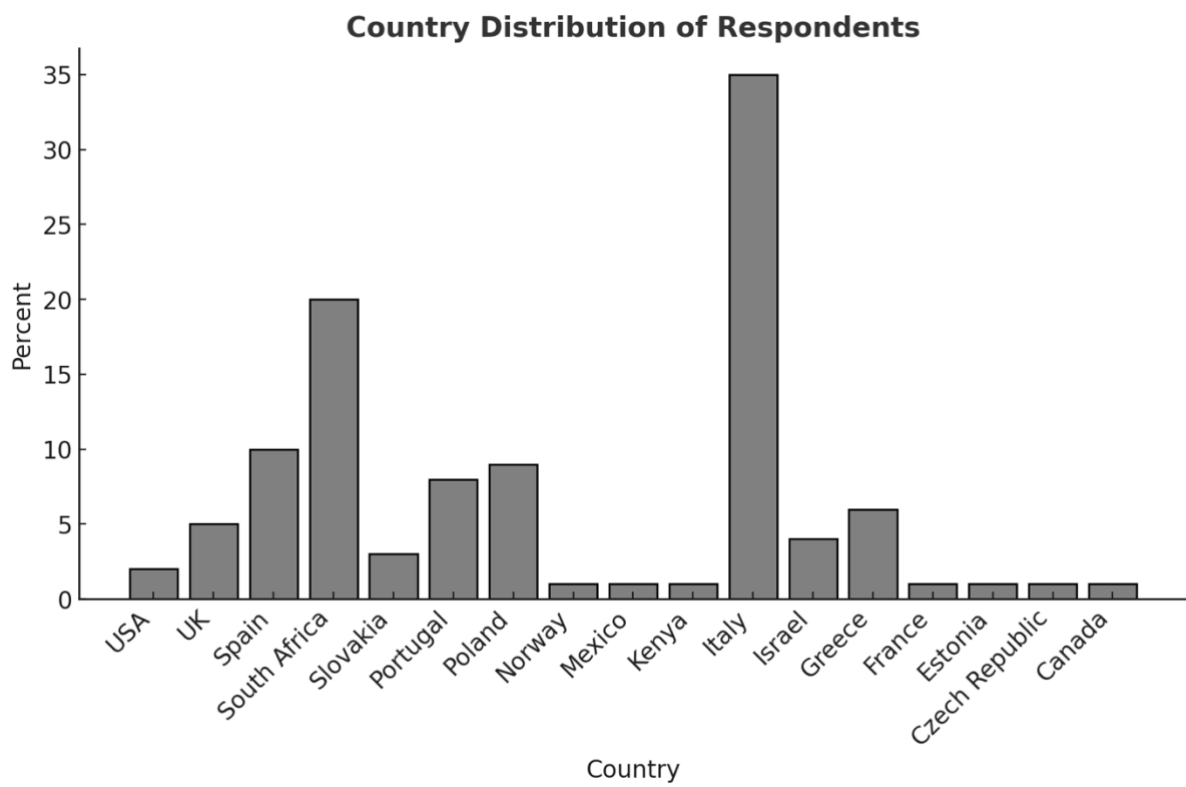


*Bar chart illustrating the country distribution of respondents.*

*Table 5 Country Breakdown of Respondents (N = 213)*

Country	Frequency	Percent
Italy	76	35.7%
South Africa	44	20.7%
UK	32	15.0%
Poland	14	6.6%
Portugal	15	7.0%
Greece	8	3.8%
Spain	7	3.3%
USA	3	1.4%
Canada	2	0.9%
Mexico	2	0.9%
Israel	2	0.9%
Kenya	1	0.5%

Figure 5 Country Distribution



Bar chart illustrating the country distribution of respondents.

## 5.2. Results Awareness

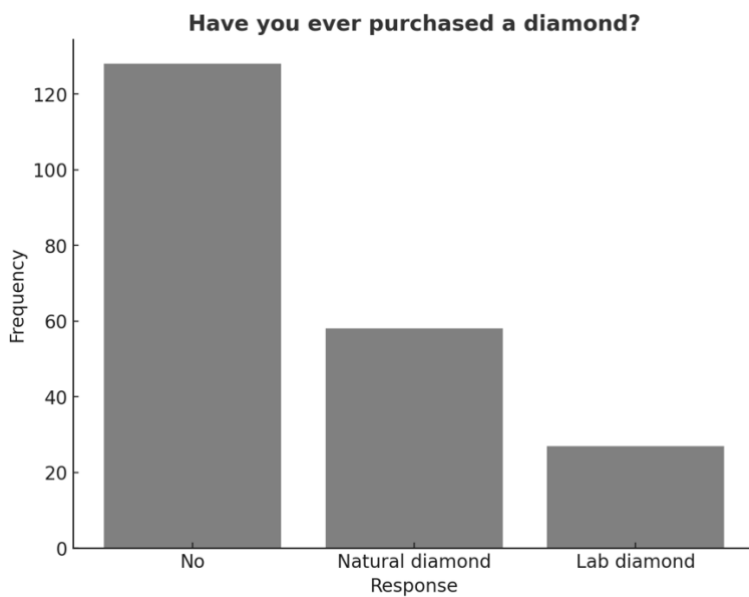
### 5.2.1. Purchasing History

The results from Question 1 indicate that 60.1% of respondents have never purchased a diamond. Among those who have, 27.2% have bought a natural diamond, while 12.7% have purchased a lab-grown diamond. This suggests a stronger preference for natural diamonds over lab-grown ones, but a significant portion of respondents have yet to make a diamond purchase.

Table 6 Purchasing History (N = 213)

Category	Frequency	Percent	Valid Percent	Cumulative Percent
No	128	60.1	60.1	60.1
Natural Diamond	58	27.2	27.2	87.3
Lab Diamond	27	12.7	12.7	100.0
<b>Total</b>	213	100.0	100.0	100.0

Figure 6 Purchasing History



Bar chart illustrating the purchasing history of diamonds.

### 5.2.2. Knowledge of the Difference Between Lab and Natural Diamonds

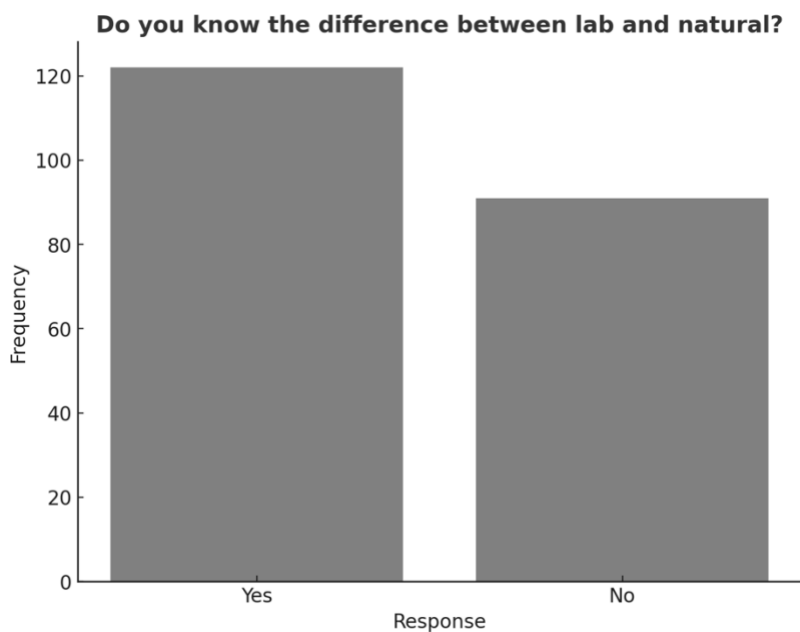
Question 2 assessed whether respondents are aware of the distinction between lab-grown and natural diamonds. The results show that 57.3% of participants are familiar with the differences,

while 42.7% are not. This indicates that while a majority have some understanding, a significant portion still lacks this knowledge.

Table 7 Knowledge of the Difference (N = 213)

Response	N	Percent
Yes	122	57.3%
No	91	42.7%

Figure 7 Knowledge of Diamond Differences



Bar chart illustrating the awareness of respondents regarding lab-grown and natural diamonds.

### 5.2.3. Preference Testing

In response to Question 3, participants were asked which type of diamond they would be more likely to purchase if they were to buy one now. The results showed that 58.7% would choose a natural diamond, while 41.3% would opt for a lab-grown diamond. This further highlights a clear preference for natural diamonds, even in a hypothetical purchase scenario.

Table 8 Preference Testing (N = 213)

Diamond Type	N	Percent
Lab-Grown Diamond	88	41.3%
Natural Diamond	125	58.7%

#### 5.2.4. Decision-Making Criteria

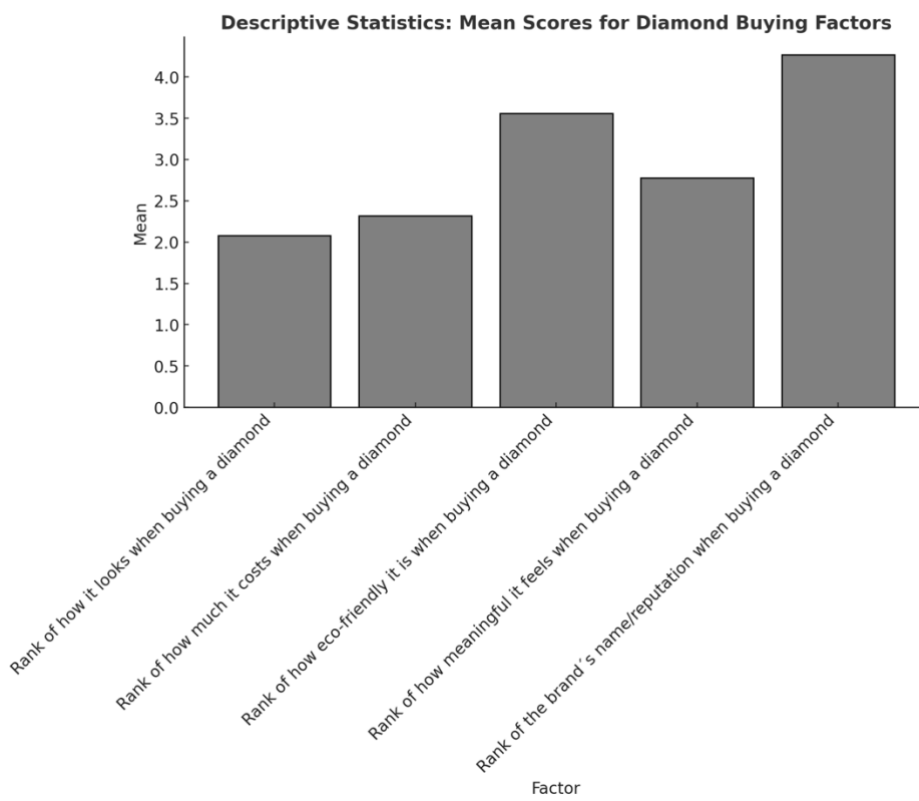
Question 4 required respondents to rank various factors in terms of importance when purchasing a diamond.

- "How it looks" was the most important factor, with a mean rank of 2.08. This highlights that appearance is a primary consideration when purchasing a diamond, with a moderate level of agreement among respondents (SD = 0.992).
- "How much it costs" followed closely with a mean rank of 2.32, indicating that price plays a key role in decision-making, though opinions varied more widely (SD = 1.194).
- "How meaningful it feels" ranked third with a mean rank of 2.78, showing that emotional significance is relevant but secondary to appearance and price (SD = 1.264).
- "How eco-friendly it is" ranked fourth, with a mean rank of 3.56, indicating that sustainability is considered but not a top priority (SD = 1.350).
- "The brand's name/reputation" ranked lowest at 4.27, suggesting that brand prestige has the least influence on purchasing decisions (SD = 0.956).

Table 9 Overview of Diamond Purchase Criteria

<b>Variable</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Rank of how it looks when buying a diamond	213	1	5	2.08	0.992
Rank of how much it costs when buying a diamond	213	1	5	2.32	1.194
Rank of how eco-friendly it is when buying a diamond	213	1	5	3.56	1.350
Rank of how meaningful it feels when buying a diamond	213	1	5	2.78	1.264
Rank of the brand's name/reputation when buying a diamond	213	1	5	4.27	0.956

Figure 8 Mean Scores for Diamond Buying Factors



The chart shows the mean scores for diamond purchasing factors. Lower scores indicate higher importance, with 1 being most important.

### 5.3. Results Crosstabulations

This section presents an analysis of the relationships between gender, income, and location with diamond purchasing behavior. The aim of this study was to investigate whether these demographic factors influence a consumer's likelihood of purchasing a diamond, as well as their preference between natural and lab-grown diamonds.

#### 5.3.1. Gender and Diamond Purchasing

The analysis examines the relationship between gender and diamond purchasing behavior. Among 110 male respondents, 74 have never purchased a diamond, 29 bought a natural diamond, and 7 bought a lab-grown diamond. Of the 100 females, 51 have never purchased a diamond, 29 bought a natural diamond, and 20 bought a lab-grown diamond.

The Chi-Square test yielded a p-value of 0.059, indicating no significant relationship. However, the likelihood ratio test ( $p = 0.037$ ) and the Linear-by-Linear Association test ( $p = 0.024$ ) suggest weak to moderate associations. Small sample sizes in some categories limit the strength of these findings, so the relationship should be interpreted cautiously.

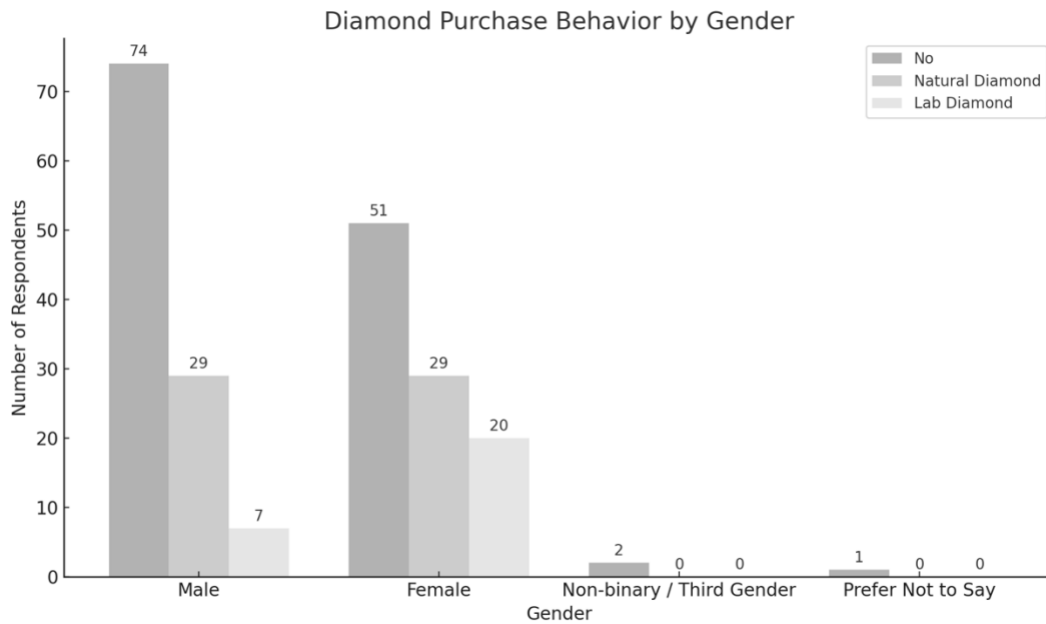
Table 10 Crosstabulation of Gender and Diamond Purchasing Behavior

Gender	No	Natural Diamond	Lab Diamond	Total
Male	74	29	7	110
Female	51	29	20	100
Non-binary / Third Gender	2	0	0	2
Prefer Not to Say	1	0	0	1
<b>Total</b>	128	58	27	213

Table 11 Chi-Square Tests for Gender and Diamond Purchasing Behavior

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.146a	6	0.059
Likelihood Ratio	13.391	6	0.037
Linear-by-Linear Association	5.077	1	0.024
N of Valid Cases	213		

Figure 9 Diamond Purchase Behavior by Region



Bar chart illustrating the number of respondents by gender and their corresponding diamond purchasing behavior.

### 5.3.2. Income and Diamond Purchasing

The analysis reveals a significant relationship between income level and diamond purchasing behavior ( $\chi^2 = 31.977$ ,  $p < 0.001$ ). Lower-income groups are more likely not to purchase diamonds, while middle-income groups are the primary buyers of natural diamonds. Lab-grown diamonds are purchased across all income levels but are somewhat more common among lower and middle-income groups.

The moderate association (Cramér’s  $V = 0.274$ ) suggests that income influences purchasing decisions, although other factors may also play a role. Additionally, some income categories had very few responses, which could impact the reliability of the results.

Table 12 Crosstabulation of Diamond Purchase Behavior and Annual Income

Annual Income	Less than 20,000€	20,000-39,000€	40,000-59,000€	60,000-89,000€	90,000-119,000€	120,000€ and more	Total
Have you ever							

<b>purchased a diamond?</b>							
No	61	48	13	4	2	0	128
Natural diamond	15	19	16	6	2	0	58
Lab diamond	6	10	5	2	3	1	27
<b>Total</b>	82	77	34	12	7	1	213

Table 13 Chi-Square Tests for Diamond Purchasing Behavior and Annual Income

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	31.977a	10	< 0.001
Likelihood Ratio	27.335	10	0.002
Linear-by-Linear Association	20.752	1	< 0.001
N of Valid Cases	213		

### 5.3.3. Location and Diamond Purchasing

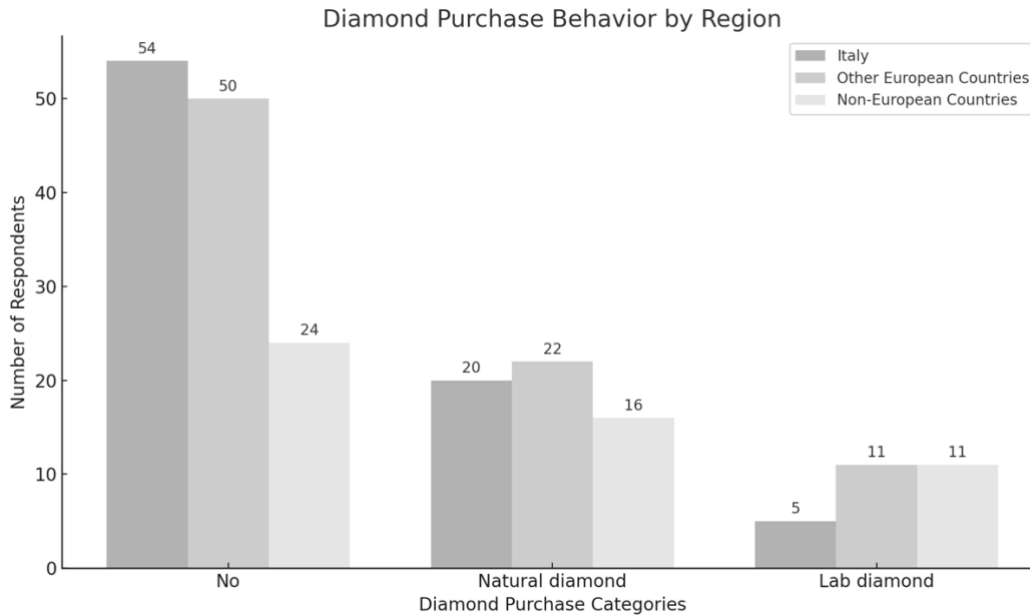
Regional differences in diamond purchasing are evident. Italy has the highest percentage of non-buyers (68.4%), with only 25.3% purchasing natural diamonds and 6.3% buying lab-grown diamonds. Other European countries show slightly higher engagement: 60.2% never purchased diamonds, 26.5% bought natural diamonds, and 13.3% chose lab-grown alternatives. Non-European countries have the highest purchasing rates, with 52.9% buying diamonds—31.4% choosing natural and 21.6% opting for lab-grown diamonds, the highest proportion across regions.

South Africa (20.7%) reveals that it plays a significant role in non-European diamond purchases, likely reflecting its strong diamond market. Meanwhile, the UK (15.0%), Poland (6.6%), and Portugal (7.0%) are key contributors in Europe. North America shows lower purchasing rates (~3%), possibly due to cultural differences.

The findings highlight strong regional variations, with non-European respondents more likely to buy diamonds and prefer lab-grown options (21.6%) compared to other regions. Despite

these differences, natural diamonds remain the preferred choice worldwide. However, Italy’s high non-buying rate (68.4%) indicates lower engagement with diamond purchases.

Figure 10 Diamond Purchase Behavior by Region



Bar chart illustrating the number of respondents from three regions and their corresponding diamond purchasing behavior.

Table 14 Crosstabulation of Diamond Purchase Behavior and Current Location

Where do you currently live?	Italy	Other European Countries	Non-European Countries	Total
<b>Have you ever purchased a diamond?</b>				
No	54 (68.4%)	50 (60.2%)	24 (47.1%)	128 (60.1%)
Natural diamond	20 (25.3%)	22 (26.5%)	16 (31.4%)	58 (27.2%)
Lab diamond	5 (6.3%)	11 (13.3%)	11 (21.6%)	27 (12.7%)
<b>Total</b>	79 (100%)	83 (100%)	51 (100%)	213 (100%)

*Table 15 Chi-Square Tests for Diamond Purchasing Behavior and Current Location*

<b>Test</b>	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Pearson Chi-Square	8.497a	4	0.075
Likelihood Ratio	8.577	4	0.073
Linear-by-Linear Association	7.418	1	0.006
N of Valid Cases	213		

## 5.4. Consumer Likelihood to Purchase Lab-Grown vs. Natural Diamonds Across Different Marketing Strategies

### 5.4.1. Impact of Pricing on Consumer Purchase Intentions

The survey examined how price influences purchasing decisions for lab-grown and natural diamonds, particularly when respondents were aware that lab-grown diamonds look identical but cost less.

#### a) Purchasing Intentions for Lab-Grown Diamonds

When asked about their likelihood of purchasing a lab-grown diamond that looks identical to a natural diamond but costs less, 63.4% of respondents indicated they were likely or very likely to buy it. In contrast, only 16.9% were unlikely or very unlikely, suggesting that the price advantage of lab-grown diamonds is an important factor for most consumers.

*Table 16 Likelihood of Purchasing a Lab-Grown Diamond When Knowing It Looks Identical but Costs Less*

<b>Response Category</b>	<b>N</b>	<b>%</b>
Very Unlikely	9	4.2%
Unlikely	27	12.7%
Neutral	42	19.7%
Likely	72	33.8%
Very Likely	63	29.6%

#### b) Purchasing Intentions for Natural Diamonds

When considering a natural diamond, despite knowing that lab-grown diamonds look identical and cost less, 46.5% of respondents still expressed a likelihood to purchase a natural diamond. However, 32.4% stated they would be unlikely or very unlikely to choose it. This suggests that while price is an important factor, other considerations such as tradition, emotional value, or perceived authenticity may also influence purchasing decisions.

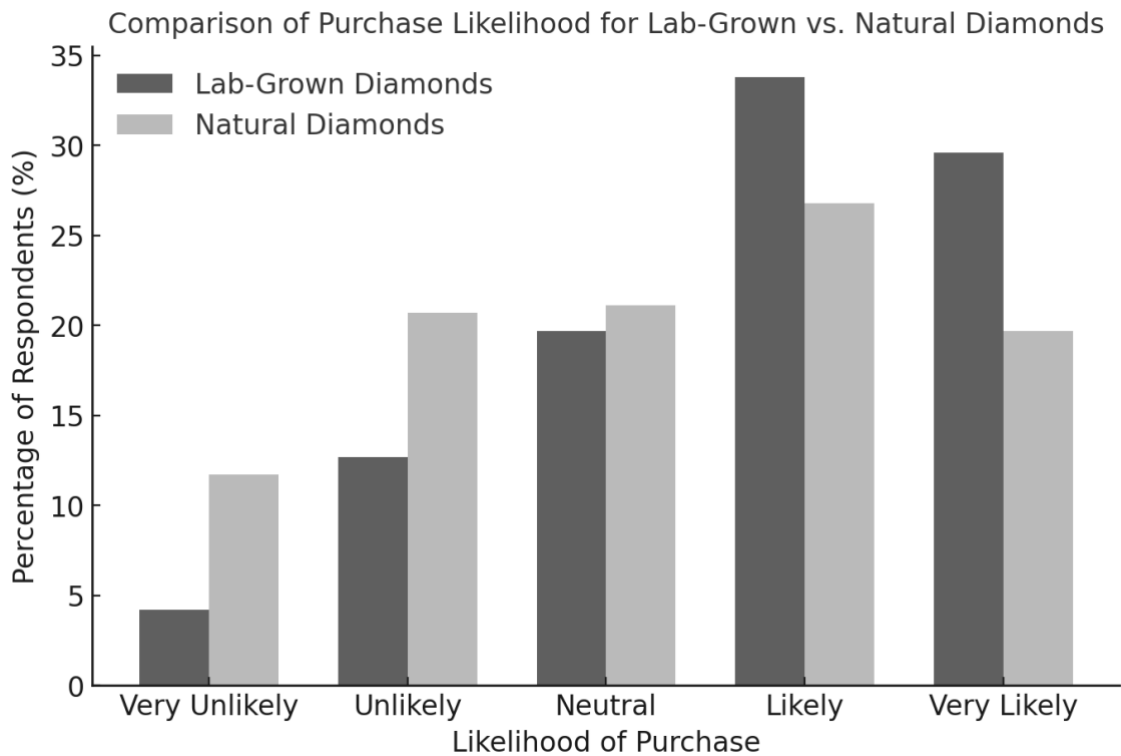
*Table 17 Likelihood of Purchasing a Natural Diamond When Knowing Lab-Grown Diamonds Look Identical but Cost Less*

<b>Response Category</b>	<b>N</b>	<b>%</b>
Very Unlikely	25	11.7%
Unlikely	44	20.7%
Neutral	45	21.1%
Likely	57	26.8%
Very Likely	42	19.7%

c) Side-by-Side Comparison of Price Impact

The findings suggest that lab-grown diamonds attract consumers looking for a more affordable option. However, a significant portion of respondents still prefers natural diamonds, indicating that factors beyond price, such as authenticity, emotional significance, or perceived long-term value, play a role in purchasing decisions.

Figure 11 Impact of Price on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds, based on the survey results. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

5.4.2. Impact of Environmental Sustainability on Purchase Intentions

The survey examined how environmental concerns influence purchasing decisions for lab-grown and natural diamonds, particularly when respondents were informed that lab-grown diamonds do not require mining, which can harm the planet.

a) Purchasing Intentions for Lab-Grown Diamonds

When asked about purchasing a lab-grown diamond due to its environmental benefits, 71.8% of respondents were likely or very likely to choose it. In contrast, only 12.7% were unlikely or very unlikely, showing strong support for lab-grown diamonds based on their eco-friendliness.

*Table 18 Likelihood of Purchasing a Lab-Grown Diamond Due to Environmental Benefits*

<b>Response Category</b>	<b>N</b>	<b>%</b>
Very Unlikely	10	4.7%
Unlikely	17	8.0%
Neutral	33	15.5%
Likely	74	34.7%
Very Likely	79	37.1%

b) Purchasing Intentions for Natural Diamonds

When considering a natural diamond, despite knowing that lab-grown diamonds have a lower environmental impact, only 33.0% of respondents were likely or very likely to purchase a natural diamond. Meanwhile, 42.8% stated they would be unlikely or very unlikely to choose it, indicating that environmental concerns discourage many from purchasing natural diamonds.

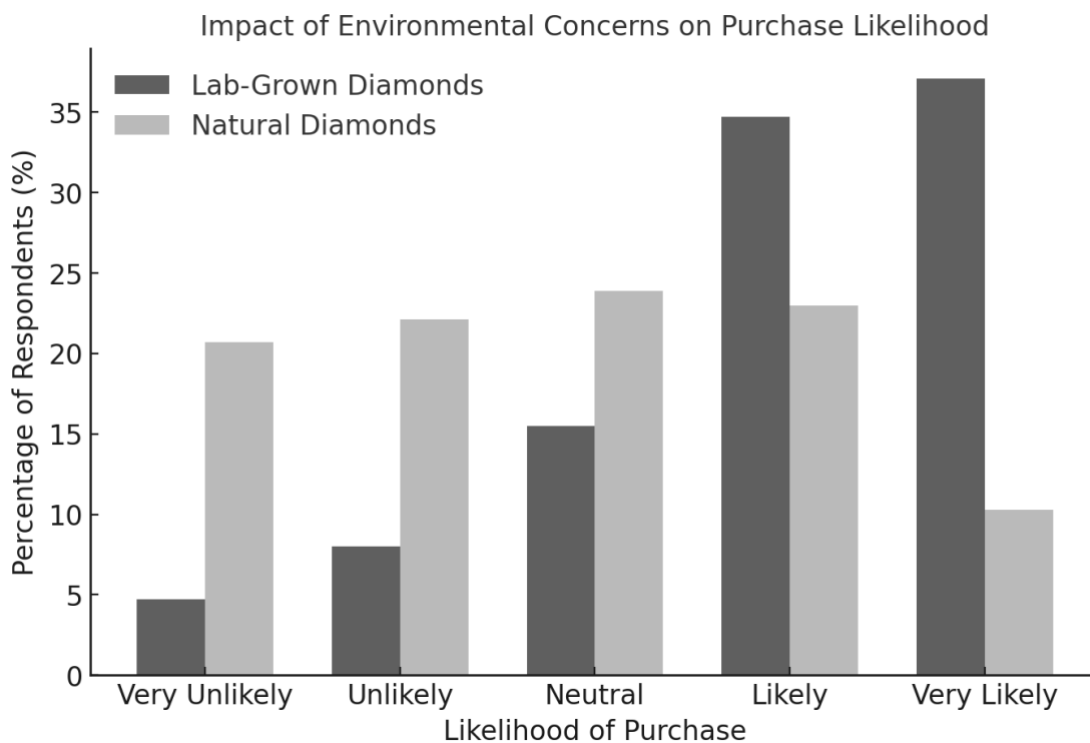
*Table 19 Likelihood of Purchasing a Natural Diamond Due to Environmental Benefits*

<b>Response Category</b>	<b>N</b>	<b>%</b>
Very Unlikely	44	20.7%
Unlikely	47	22.1%
Neutral	51	23.9%
Likely	49	23.0%
Very Likely	22	10.3%

c) Side-by-Side Comparison of Environmental Sustainability Impact

The environmental benefits of lab-grown diamonds appear to be a significant motivator for most consumers, while natural diamonds face more resistance due to concerns about their environmental impact.

Figure 12 Impact of Environmental Sustainability on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on environmental concerns. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

#### 5.4.3. Impact of Emotional Appeal and Tradition on Purchase Likelihood

The survey examined how the traditional and symbolic value of diamonds influences purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when presented with the idea that natural diamonds are timeless and often considered a symbol of lasting love and tradition.

##### a) Purchasing Intentions for Lab-Grown Diamonds

When considering a lab-grown diamond, 48.9 percent of respondents indicated they were likely or very likely to purchase one, despite the strong association of natural diamonds with tradition. Meanwhile, 25.4 percent expressed they were unlikely or very unlikely, suggesting that while some consumers still associate natural diamonds with lasting value, lab-grown diamonds remain a viable option for many.

Table 20 Likelihood of Purchasing a Lab-Grown Diamond Despite Traditional Symbolism

Likelihood	N	%
Very Unlikely	17	8.0
Unlikely	37	17.4
Neutral	55	25.8
Likely	80	37.6
Very Likely	24	11.3

b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 55.9 percent of respondents indicated they were likely or very likely to purchase one based on its traditional and symbolic value. In contrast, 23.5 percent were unlikely or very unlikely to purchase a natural diamond, suggesting that while tradition is a strong influence, it is not the sole deciding factor for all consumers.

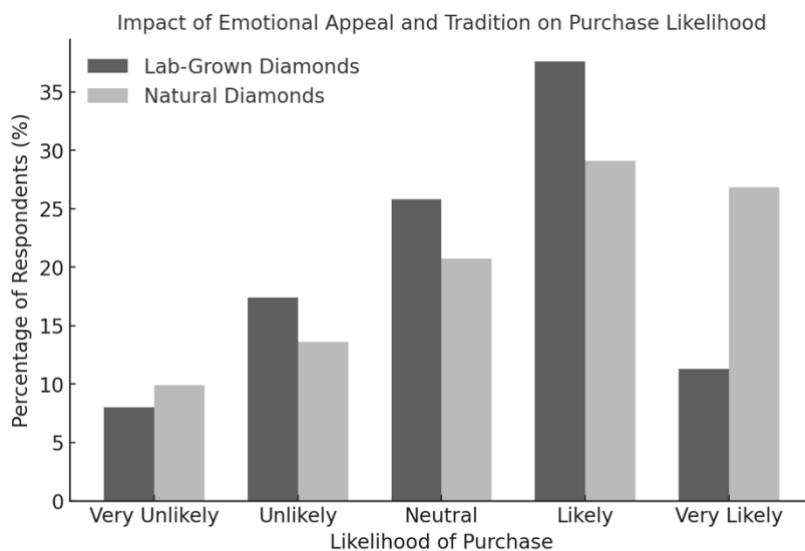
Table 21 Likelihood of Purchasing a Natural Diamond Due to Traditional Symbolism

Likelihood	N	%
Very Unlikely	21	9.9
Unlikely	29	13.6
Neutral	44	20.7
Likely	62	29.1
Very Likely	57	26.8

c) Side-by-Side Comparison of Emotional Appeal Impact

The findings indicate that natural diamonds remain preferred due to their symbolic and traditional significance, but lab-grown diamonds continue to gain consumer interest, especially among those who prioritize affordability or ethical considerations over tradition.

Figure 13 Impact of Emotional Appeal on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on their traditional and symbolic value. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

#### 5.4.4. Impact of Luxury Branding and Exclusivity on Purchase Likelihood

The survey examined how the association of natural diamonds with luxury brands, rarity, and exclusivity influences purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when presented with these branding elements.

##### a) Purchasing Intentions for Lab-Grown Diamonds

When considering a lab-grown diamond, 48.3 percent of respondents indicated they were likely or very likely to purchase one, even when luxury branding and exclusivity were emphasized for natural diamonds. Meanwhile, 27.3 percent were unlikely or very unlikely, suggesting that while some consumers associate exclusivity with natural diamonds, many still see lab-grown diamonds as a viable choice.

*Table 22 Likelihood of Purchasing a Lab-Grown Diamond Despite Luxury Branding and Exclusivity*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	11	5.2
Unlikely	47	22.1
Neutral	52	24.4
Likely	74	34.7
Very Likely	29	13.6

##### b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 47.9 percent of respondents were likely or very likely to purchase one when informed of their connection to luxury brands, rarity, and exclusivity. In contrast, 27.7 percent were unlikely or very unlikely to purchase a natural diamond, indicating that luxury branding remains an important factor but does not completely determine consumer choices.

*Table 23 Likelihood of Purchasing a Natural Diamond Due to Luxury Branding and Exclusivity*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	34	16.0
Unlikely	25	11.7
Neutral	52	24.4

Likely	52	24.4
Very Likely	50	23.5

c) *Side-by-Side Comparison of Luxury Strategy Impact*

The findings suggest that luxury branding and exclusivity contribute to the appeal of natural diamonds, but lab-grown diamonds still attract a significant portion of consumers. While some individuals prefer natural diamonds for their rarity and brand association, others prioritize affordability, ethical concerns, or personal preference.

Figure 14 Impact of Luxury Strategy on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on their association with luxury brands, rarity, and exclusivity. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

5.4.5. *Impact of Customization Options on Purchase Likelihood*

The survey examined how the ability to customize diamonds using advanced technology influences purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when customization was emphasized.

a) *Purchasing Intentions for Lab-Grown Diamonds*

When considering a lab-grown diamond, 68.6 percent of respondents indicated they were likely or very likely to purchase one due to its customization options. Only 14.6 percent were unlikely or very unlikely, suggesting that the ability to tailor a diamond to personal preferences is a strong motivator for consumers.

*Table 24 Likelihood of Purchasing a Lab-Grown Diamond Due to Customization Options*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	8	3.8
Unlikely	23	10.8
Neutral	36	16.9
Likely	80	37.6
Very Likely	66	31.0

b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 40.8 percent of respondents indicated they were likely or very likely to purchase one, even when informed that lab-grown diamonds could be customized. Meanwhile, 31.0 percent were unlikely or very unlikely, suggesting that some consumers still prefer natural diamonds despite the customization advantages of lab-grown alternatives.

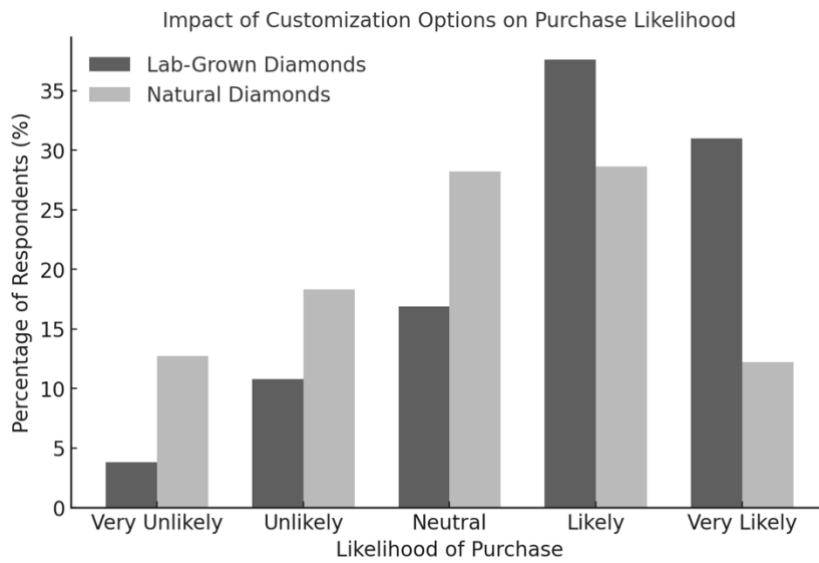
*Table 25 Likelihood of Purchasing a Natural Diamond Despite Customization Options in Lab-Grown Diamonds*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	27	12.7
Unlikely	39	18.3
Neutral	60	28.2
Likely	61	28.6
Very Likely	26	12.2

c) Side-by-Side Comparison of Customization Impact

The findings indicate that customization is a key factor in consumer decision-making, with a strong preference for lab-grown diamonds among those who value personalization. However, a significant portion of consumers still prefers natural diamonds despite the customization advantages of lab-grown options.

Figure 15 Impact of Customization on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on their customization potential. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

#### 5.4.6. Impact of Celebrity Endorsements and Prestige on Purchase Likelihood

The survey examined how the association of natural diamonds with celebrity endorsements and prestige influences purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when natural diamonds were framed as symbols of elegance and exclusivity.

##### a) Purchasing Intentions for Lab-Grown Diamonds

When considering a lab-grown diamond, 48.8 percent of respondents indicated they were likely or very likely to purchase one, despite the emphasis on celebrity endorsements and exclusivity for natural diamonds. Meanwhile, 23.4 percent were unlikely or very unlikely, suggesting that while some consumers are influenced by prestige, many still view lab-grown diamonds as a viable option.

Table 26 Likelihood of Purchasing a Lab-Grown Diamond Despite Celebrity Endorsements and Prestige

Likelihood	N	%
Very Unlikely	15	7.0
Unlikely	35	16.4

Neutral	59	27.7
Likely	75	35.2
Very Likely	29	13.6

b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 39.9 percent of respondents were likely or very likely to purchase one when informed of their association with celebrities and prestige. In contrast, 34.8 percent were unlikely or very unlikely, indicating that while endorsements and exclusivity play a role, they do not entirely determine consumer choices.

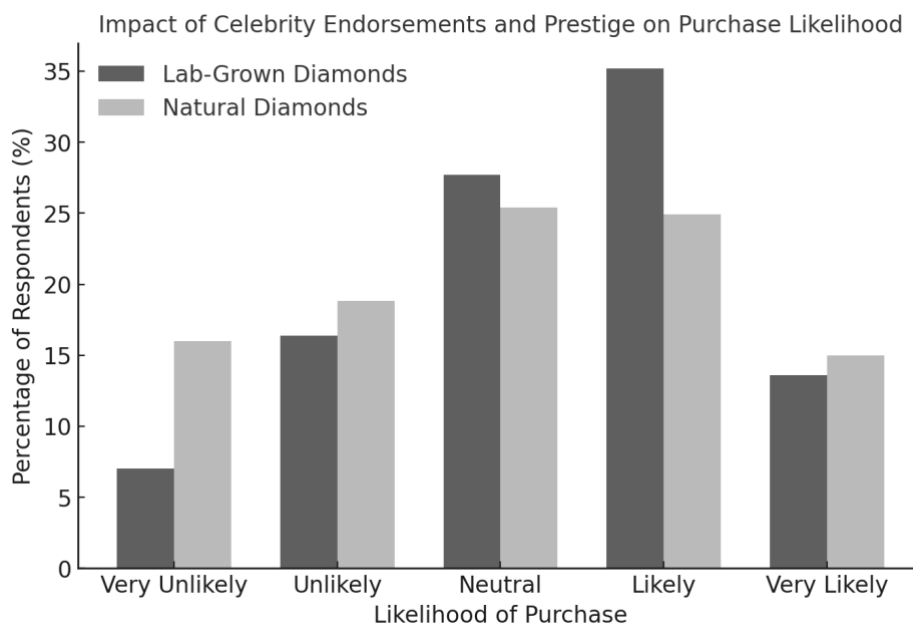
Table 27 Likelihood of Purchasing a Natural Diamond Due to Celebrity Endorsements and Prestige

Likelihood	N	%
Very Unlikely	34	16.0
Unlikely	40	18.8
Neutral	54	25.4
Likely	53	24.9
Very Likely	32	15.0

c) Side-by-Side Comparison Celebrity Impact

The findings suggest that celebrity endorsements and perceived prestige contribute to the appeal of natural diamonds, but lab-grown diamonds continue to attract a significant portion of consumers. While some individuals prefer natural diamonds for their association with exclusivity, others prioritize affordability, ethical considerations, or personal preference.

Figure 16 Impact of Celebrity on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on their association with celebrity endorsements and exclusivity. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

#### 5.4.7. Impact of Ethical Considerations on Purchase Likelihood

The survey examined how ethical concerns, particularly the environmental and social issues associated with traditional diamond mining, influence purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when ethical production was emphasized.

##### a) Purchasing Intentions for Lab-Grown Diamonds

When considering a lab-grown diamond, 70.5 percent of respondents indicated they were likely or very likely to purchase one due to its ethical production. Only 13.2 percent were unlikely or very unlikely, suggesting that ethical concerns are a significant motivator for many consumers.

Table 28 Likelihood of Purchasing a Lab-Grown Diamond Due to Ethical Considerations

Likelihood	N	%
Very Unlikely	11	5.2
Unlikely	17	8.0
Neutral	35	16.4
Likely	80	37.6
Very Likely	70	32.9

##### b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 34.8 percent of respondents were likely or very likely to purchase one, despite being informed that lab-grown diamonds avoid the environmental and social issues caused by traditional mining. In contrast, 39.4 percent were unlikely or very unlikely, indicating that ethical concerns discourage many from choosing natural diamonds.

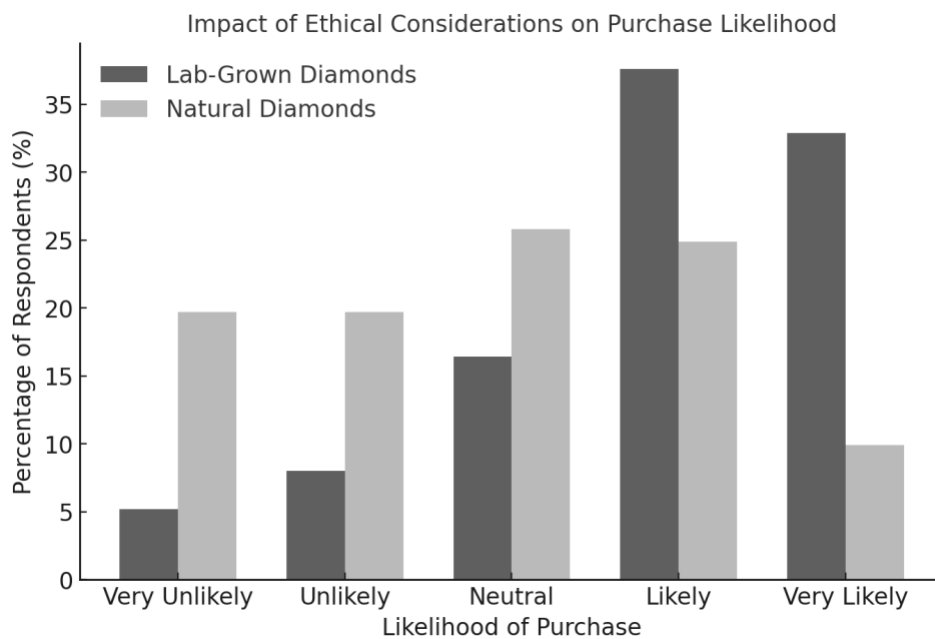
Table 29 Likelihood of Purchasing a Natural Diamond Despite Ethical Concerns

Likelihood	N	%
Very Unlikely	42	19.7
Unlikely	42	19.7
Neutral	55	25.8
Likely	53	24.9
Very Likely	21	9.9

c) Side-by-Side Comparison Ethical Production Strategy

The findings suggest that ethical considerations play a significant role in consumer decision-making, with a strong preference for lab-grown diamonds among those concerned about environmental and social impact. However, a portion of consumers still prefers natural diamonds despite awareness of ethical issues.

Figure 17 Impact of Ethical Production on Purchase Likelihood



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on ethical concerns. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

5.4.8. Impact of Limited-Time Discounts on Purchase Likelihood

The survey examined how promotional offers and limited-time discounts influence purchasing decisions for lab-grown and natural diamonds. Respondents were asked about their likelihood of purchasing a diamond when special discounts were offered on natural diamonds.

a) Purchasing Intentions for Lab-Grown Diamonds

When considering a lab-grown diamond, 50.7 percent of respondents indicated they were likely or very likely to purchase one, despite the availability of discounts on natural diamonds.

Meanwhile, 19.8 percent were unlikely or very unlikely, suggesting that while discounts can influence decision-making, many consumers still prefer lab-grown diamonds regardless of pricing strategies.

*Table 30 Likelihood of Purchasing a Lab-Grown Diamond Despite Limited-Time Discounts on Natural Diamonds*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	18	8.5
Unlikely	24	11.3
Neutral	63	29.6
Likely	81	38.0
Very Likely	27	12.7

b) Purchasing Intentions for Natural Diamonds

For natural diamonds, 61.0 percent of respondents were likely or very likely to purchase one when informed of a special discount. In contrast, 21.1 percent were unlikely or very unlikely, indicating that discounts are an effective strategy in driving interest in natural diamonds.

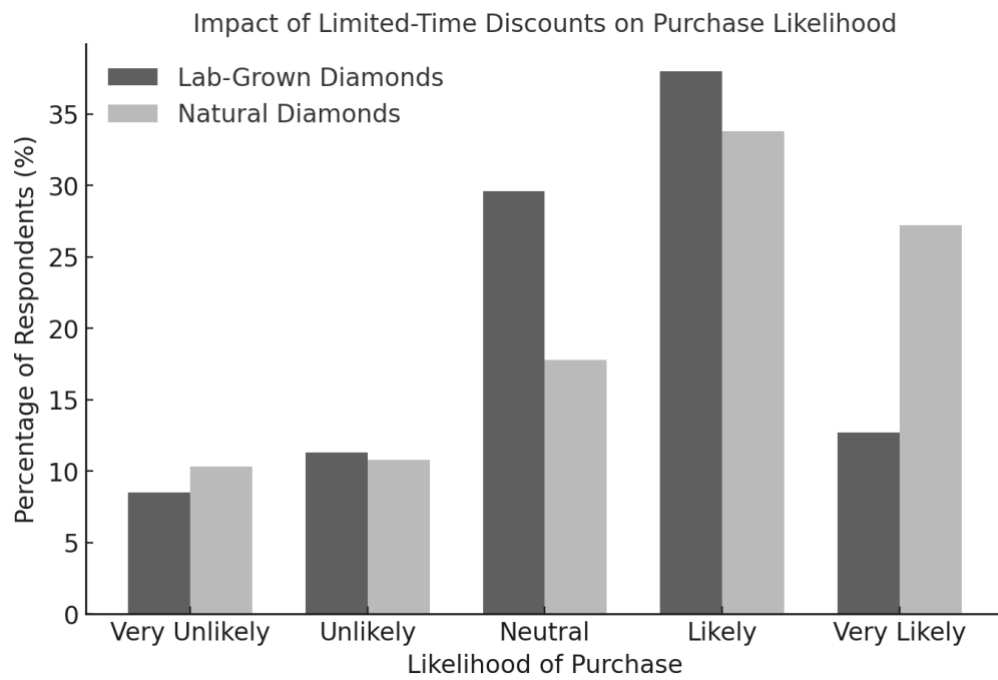
*Table 31 Likelihood of Purchasing a Natural Diamond Due to Limited-Time Discounts*

<b>Likelihood</b>	<b>N</b>	<b>%</b>
Very Unlikely	22	10.3
Unlikely	23	10.8
Neutral	38	17.8
Likely	72	33.8
Very Likely	58	27.2

c) Side-by-Side Comparison Discount Strategy

The findings suggest that limited-time discounts are an effective marketing strategy for natural diamonds, significantly increasing their attractiveness to consumers. However, many consumers remain committed to lab-grown diamonds, indicating that factors beyond price, such as ethical considerations or sustainability, continue to influence purchasing decisions.

*Figure 18 Impact of Limited-Time Discounts on Purchase Likelihood*



Here is a bar chart comparing the likelihood of purchasing lab-grown vs. natural diamonds based on limited-time discounts. The dark grey bars represent responses for lab-grown diamonds, while the light grey bars represent responses for natural diamonds.

## 5.5. Hypothesis Testing

The following hypothesis was formulated and tested to assess the impact of marketing strategies on diamond purchasing intentions: *Marketing strategies influence consumer purchasing intentions for lab-grown diamonds more than for natural diamonds.*

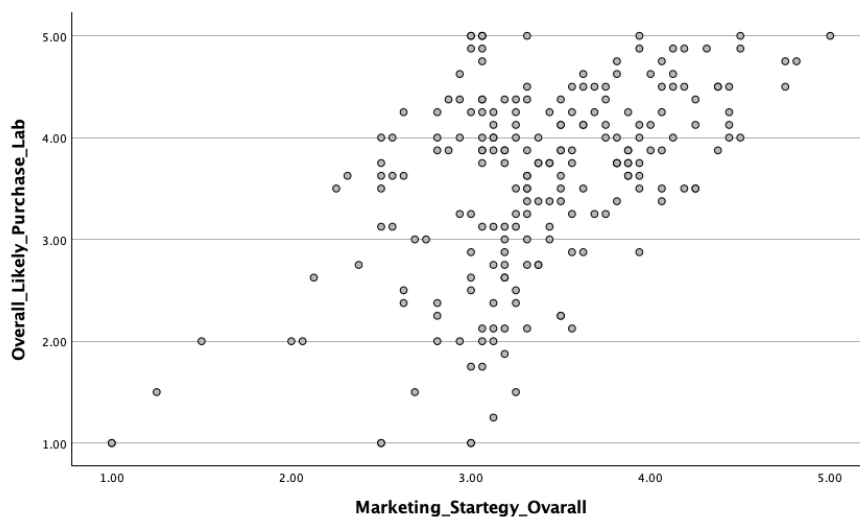
### 5.5.1. Testing the Assumptions

To assess whether linear regression is appropriate for testing the hypothesis and examining the relationship between overall purchase likelihood (Lab/Natural) and marketing strategy, five key assumptions had to be met. An alpha level of 0.05 was used for all statistical tests.

#### a) Linear relationship

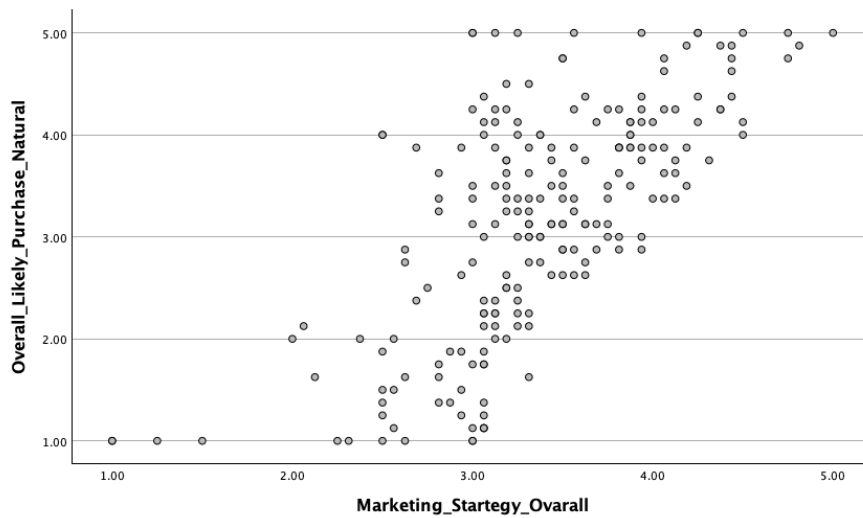
The first assumption requires a linear relationship to exist between the dependent variable (Overall Likely Purchase of Lab Diamonds / Overall Likely Purchase of Natural Diamonds) and the independent variable (Marketing Strategy Overall). A scatter plot was generated to assess whether the assumption was met. The points in the scatterplot appear to follow a moderately straight line, demonstrating that the two variables have a linear relationship. Therefore, the assumption is satisfied.

Figure 19 Scatterplot of the Correlation Lab-Diamonds



Scatterplot illustrating the correlation between marketing strategies and purchase intention for lab - diamonds

Figure 20 Scatterplot of the Correlation Natural Diamonds



Scatterplot illustrating the correlation between marketing strategies and purchase intention for natural diamonds

b) Independence of Errors

The second assumption is that the residuals must be independent. To test for autocorrelation in the linear regression model, the Durbin-Watson test was conducted. The resulting value of 1.820, which is consistent for both natural and lab diamond purchasing intention models, indicates no evidence of autocorrelation between the residuals, thereby confirming that the assumption of independence is satisfied.

Table 32 Model Summary for Lab-Diamonds

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.527	0.277	0.274	0.82110	1.820

- a. Predictors: (Constant), Marketing Strategy Overall
- b. Dependent Variable: Overall Likely Purchase of Lab Diamonds

Table 33 Model Summary for Natural Diamonds

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.683	0.467	0.464	0.82110	1.820

- a. Predictors: (Constant), Marketing Strategy Overall
- b. Dependent Variable: Overall Likely Purchase of Natural Diamonds

*c) Homoscedasticity*

The Breusch-Pagan test for homoscedasticity was conducted by regressing the squared residuals on Marketing Strategy Overall. The p-value for Marketing Strategy Overall was 1.000, which is much greater than the significance level of 0.05. This indicates that the variance of the residuals is constant, and the assumption of **homoscedasticity** is satisfied, meaning there is no evidence of heteroscedasticity in the model.

*d) Normality*

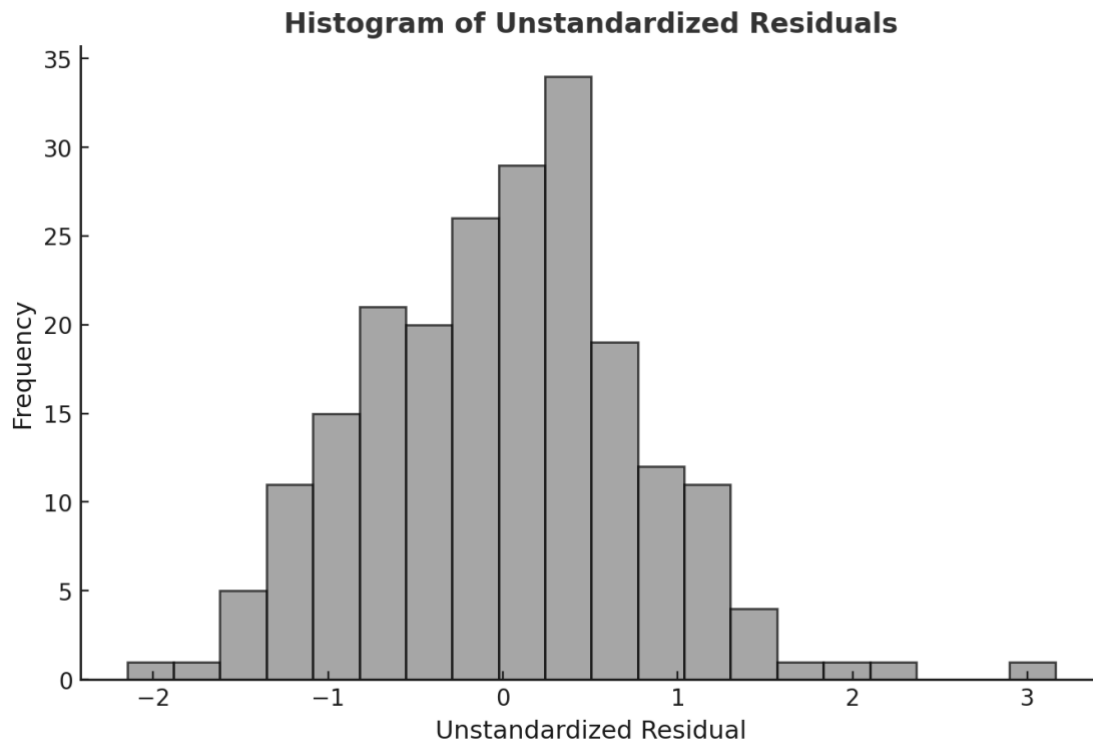
The assumption of normality was tested using the Shapiro-Wilk and Kolmogorov-Smirnov tests on the unstandardized residuals. The results indicated that the Kolmogorov-Smirnov test statistic was .042 ( $p = .200$ ) and the Shapiro-Wilk test statistic was .988 ( $p = .062$ ). Since both p-values are greater than 0.05, we fail to reject the null hypothesis, suggesting that the residuals follow a normal distribution.

Visual inspection of the histogram and Normal Q-Q plot further supported normality, as the residuals appeared symmetrically distributed around zero and closely aligned with the diagonal reference line. Additionally, the skewness (-0.326) and kurtosis (0.003) values were within acceptable ranges, reinforcing that the residuals do not show significant deviations from normality. Therefore, the normality assumption is satisfied, and no transformation of data is required.

*Table 34 Tests of Normality for Unstandardized Residuals*

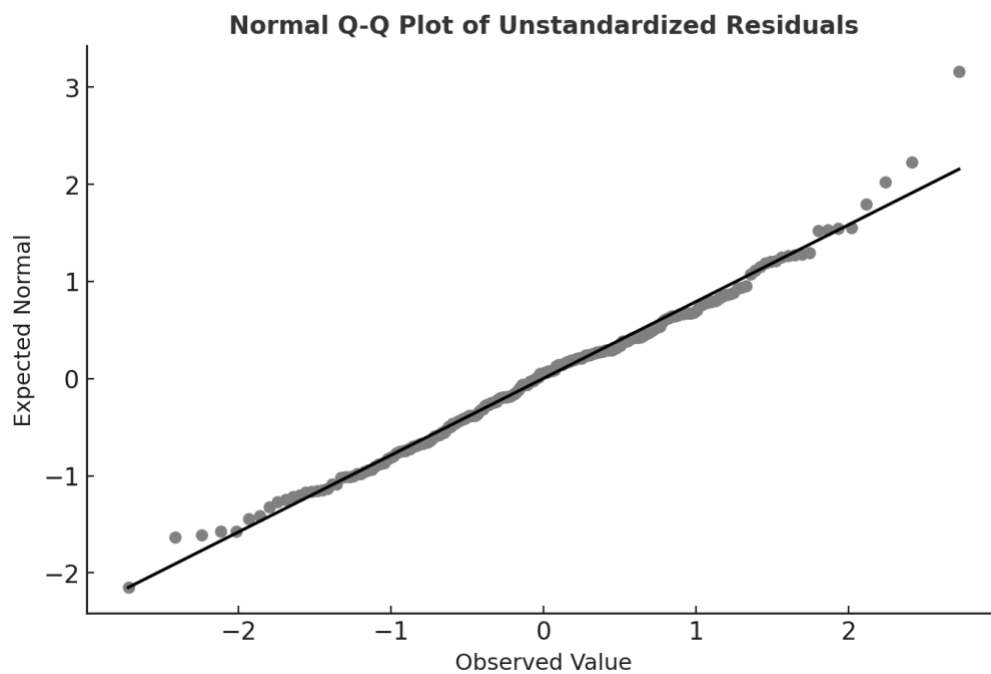
Test	Statistic	df	Sig.
<b>Kolmogorov-Smirnov</b>	0.042	213	0.200*
<b>Shapiro-Wilk</b>	0.988	213	0.062

*Figure 21 Distribution of Unstandardized Residuals*



Histogram displaying the distribution of unstandardized residuals from a regression analysis.

Figure 22 Normal Q-Q Plot of Unstandardized Residuals



Q-Q plot assessing the normality of residuals.

*e) Multicollinearity*

Multicollinearity diagnostics, as indicated by the Tolerance and VIF values, showed no signs of multicollinearity. The Tolerance values ranged from 0.233 to 0.376, and the VIF values ranged from 2.662 to 4.296, both of which are well within acceptable limits (Tolerance > 0.1 and VIF < 10). This suggests that the independent variables do not exhibit significant correlations with each other, allowing for reliable estimation of their effects. Therefore, the model is free from multicollinearity issues.

*Table 35 Regression Coefficients for Predicting Overall Likely Purchase*

<b>Predictor</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>Tolerance</b>	<b>VIF</b>
(Constant)	0.870	0.321	—	2.706	.007	—	—
Ethical Strategy	0.132	0.154	0.096	0.855	.393	0.273	3.669
Promotion Strategy	0.140	0.121	0.111	1.155	.249	0.376	2.662
Celebrity Influence Strategy	0.103	0.127	0.088	0.815	.416	0.299	3.340
Customization Strategy	0.156	0.153	0.113	1.021	.309	0.280	3.569
Luxury Strategy	0.009	0.143	0.007	0.063	.950	0.250	4.002
Emotional Appeal Strategy	-0.106	0.159	0.081	0.667	.506	0.233	4.296
Eco-Friendly Strategy	-0.173	0.145	-0.124	-1.193	.234	0.322	3.108
Price Strategy	0.316	0.149	0.230	2.123	.035	0.295	3.39

➔ *Conclusion of Assumption Testing*

All assumptions are satisfied, confirming the validity of the regression model.

### 5.5.2. Testing Effectiveness of Individual Marketing Strategies

Before analyzing the overall impact of marketing strategies and testing the hypothesis, each strategy was first examined individually. To evaluate their influence on purchasing intentions for lab-grown versus natural diamonds, a series of paired samples t-tests were conducted.

Survey questions (Q5 to Q12) assessed various marketing strategies, including price, eco-friendliness, emotional appeal, and luxury, among others. The primary objective was to determine the individual effect of each strategy on consumer preferences and the extent of its impact. This analysis helps identify which strategies are most effective, which have a moderate influence, and which do not significantly affect purchasing decisions.

#### Price Strategy

Participants showed a statistically significant preference for lab-grown diamonds over natural ones when informed that lab-grown diamonds look identical but cost less. On average, participants were more likely to choose lab-grown diamonds (Mean = 3.72, SD = 1.143) compared to natural diamonds (Mean = 3.22, SD = 1.301), with a mean difference of 0.498. The paired samples t-test confirmed this difference ( $t = 3.616$ ,  $df = 212$ ,  $p < 0.001$ ), with a 95% confidence interval of 0.226 to 0.769.

Table 36 Descriptive Statistics for Price Strategy

Diamond Type	Mean (M)	Standard Deviation (SD)	Sample Size (N)
Lab-Grown	3.72	1.143	213
Natural	3.22	1.301	213

Table 37 Paired Samples t-Test for Price Strategy

Comparison	Mean Difference	t	df	p-value	95% CI (Lower)	95% CI (Upper)
Lab-Grown vs. Natural	0.498	3.616	212	< .001	0.226	0.769

A moderate negative correlation ( $r = -0.348$ ,  $p < 0.001$ ) indicated a trade-off in consumer preferences: as preference for one increased, preference for the other decreased. Despite the statistical significance, the effect size was small (Cohen's  $d = 0.248$ ), suggesting that while lab-grown diamonds are preferred, the practical impact of this preference is modest.

Table 38 Correlation Between Preferences for Price Strategy

Variables	Correlation ( <i>r</i> )	<i>p</i> -value
Lab-Grown & Natural Diamonds	-0.348	< .001

Table 39 Effect Size for Price Strategy

Effect Size Metric	Value	Interpretation
Cohen’s <i>d</i>	0.248	Small effect
Hedges’ <i>g</i>	0.246	Small effect

*Environmental Sustainability Strategy*

This question assessed participants' likelihood of purchasing lab-grown versus natural diamonds when informed about the eco-friendly benefits of lab-grown diamonds due to the absence of harmful mining. Results showed a strong preference for lab-grown diamonds.

On average, participants were more likely to buy lab-grown diamonds ( $M = 3.92$ ,  $SD = 1.125$ ) than natural diamonds ( $M = 2.80$ ,  $SD = 1.288$ ), with a mean difference of 1.113. The standard errors (0.077 for lab-grown, 0.088 for natural diamonds) confirm the reliability of these estimates.

Table 40 Descriptive Statistics for Environmental Sustainability Strategy

Condition	Mean ( <i>M</i> )	<i>N</i>	Standard Deviation ( <i>SD</i> )	Standard Error Mean ( <i>SE</i> )
Lab-Grown Diamond Preference	3.92	213	1.125	0.077
Natural Diamond Preference	2.80	213	1.288	0.088

Table 41 Paired Samples *t*-Test for Environmental Sustainability Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	<i>t</i>	<i>df</i>	One-Sided <i>p</i>	Two-Sided <i>p</i>
Lab-Grown vs. Natural Diamond Preference	1.113	1.990	0.136	0.844	1.381	8.161	212	< .001	< .001

A negative correlation ( $r = -0.356, p < .001$ ) indicated a trade-off in consumer preferences—as preference for lab-grown diamonds increased, preference for natural diamonds decreased. The paired samples t-test confirmed a significant difference ( $t(212) = 8.161, p < .001$ ), with a 95% confidence interval for the mean difference ranging from 0.844 to 1.381.

The effect size (Cohen’s  $d = 0.559$ ) suggests that environmental benefits have a moderate-to-large impact on purchasing decisions. These findings demonstrate that highlighting eco-friendly attributes can significantly influence consumer behavior.

Table 42 Correlation Between Preferences for Environmental Sustainability Strategy

Pair	N	Correlation (r)	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	213	-0.356	< .001	< .001

Table 43 Effect Sizes for Environmental Sustainability Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen’s $d$	1.990	0.559	0.414	0.703
Hedges’ $g$	1.997	0.557	0.413	0.701

### Emotional Appeal Strategy

Participants showed a slight preference for purchasing natural diamonds (Mean = 3.49, SD = 1.287) over lab-grown diamonds (Mean = 3.27, SD = 1.120) when considering the emotional appeal of natural diamonds as symbols of lasting love and tradition. The mean difference of -0.225 was marginally significant ( $t = -1.727, p = 0.086$ ), suggesting a trend toward favoring natural diamonds.

Table 44 Descriptive Statistics for Emotional Appeal Strategy

Condition	Mean (M)	N	Standard Deviation (SD)	Standard Error Mean (SE)
Lab-Grown Diamond Preference	3.27	213	1.120	0.077
Natural Diamond Preference	3.49	213	1.287	0.088

Table 45 Paired Samples t-Test for Emotional Appeal Strategy

<b>Comparison</b>	<b>Mean Difference</b>	<b>Standard Deviation</b>	<b>Standard Error Mean</b>	<b>95% CI (Lower)</b>	<b>95% CI (Upper)</b>	<b><i>t</i></b>	<b><i>df</i></b>	<b>One-Sided <i>p</i></b>	<b>Two-Sided <i>p</i></b>
Lab-Grown vs. Natural Diamond Preference	-0.225	1.905	0.131	-0.483	0.032	-1.727	21	0.043	0.086

A moderate negative correlation ( $r = -0.249$ ,  $p < .001$ ) indicated an inverse relationship between preferences for lab-grown and natural diamonds. Although the correlation was modest, the large effect size (Cohen’s  $d = 1.905$ ) suggests that emotional appeal plays a strong role in shaping purchasing decisions. While preference for natural diamonds was not statistically strong, the emotional connection to tradition appeared to significantly influence consumer choices.

Table 46 Correlation Between Preferences for Emotional Appeal Strategy

<b>Pair</b>	<b><i>N</i></b>	<b>Correlation (<i>r</i>)</b>	<b>One-Sided <i>p</i></b>	<b>Two-Sided <i>p</i></b>
Lab-Grown vs. Natural Diamond Preference	213	-0.249	< .001	< .001

Table 47 Effect Sizes for Emotional Appeal Strategy

<b>Effect Size Metric</b>	<b>Standardizer</b>	<b>Point Estimate</b>	<b>95% CI (Lower)</b>	<b>95% CI (Upper)</b>
Cohen’s <i>d</i>	1.905	-0.118	-0.253	0.017
Hedges’ <i>g</i>	1.912	-0.118	-0.252	0.017

### Luxury Strategy

It is shown that participants' likelihood of purchasing lab-grown versus natural diamonds, when informed that natural diamonds are linked to luxury brands, was nearly identical. On average, participants were slightly more likely to purchase a lab-grown diamond (Mean = 3.30) compared to a natural diamond (Mean = 3.28). However, the difference was not statistically significant ( $t = 0.143$ ,  $p = 0.887$ ).

Table 48 Descriptive Statistics for Luxury Strategy

<b>Condition</b>	<b>Mean (<i>M</i>)</b>	<b><i>N</i></b>	<b>Standard Deviation (<i>SD</i>)</b>	<b>Standard Error Mean (<i>SE</i>)</b>
------------------	------------------------	-----------------	---------------------------------------	--

Lab-Grown Diamond Preference	3.30	213	1.112	0.076
Natural Diamond Preference	3.28	213	1.368	0.094

Table 49 Paired Samples t-Test for Luxury Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	t	df	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	0.019	1.923	0.132	-0.241	0.279	0.143	212	0.443	0.887

A moderate negative correlation ( $r = -0.194$ ,  $p = 0.005$ ) was observed between the two preferences, suggesting a weak inverse relationship. The effect size was minimal (Cohen’s  $d = 0.010$ ), indicating that the association of natural diamonds with luxury brands did not have a substantial influence on purchasing decisions.

Table 50 Correlation Between Preferences for Lab-Grown and Natural Diamonds (Luxury Strategy)

Pair	N	Correlation (r)	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	213	-0.194	.002	.005

Table 51 Effect Sizes for Luxury Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen’s $d$	1.923	0.010	-0.125	0.144
Hedges’ $g$	1.930	0.010	-0.124	0.144

### Customization Strategy

It is shown that participants were significantly more likely to purchase a lab-grown diamond (Mean = 3.81) compared to a natural diamond (Mean = 3.09) when considering the ability to customize the diamonds using advanced technology. The mean difference of 0.718 indicates a strong preference for lab-grown diamonds in this context. The paired samples t-test

confirmed this difference as statistically significant ( $t = 5.676, p < 0.001$ ), with a 95% confidence interval for the mean difference ranging from 0.469 to 0.968.

Table 52 Descriptive Statistics for Customization Strategy

Condition	Mean (M)	N	Standard Deviation (SD)	Standard Error Mean (SE)
Lab-Grown Diamond Preference	3.81	213	1.104	0.076
Natural Diamond Preference	3.09	213	1.209	0.083

Table 53 Paired Samples t-Test for Customization Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	t	df	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	0.718	1.847	0.127	0.469	0.968	5.676	212	< .001	< .001

A moderate negative correlation ( $r = -0.273, p < 0.001$ ) was observed, suggesting that as the likelihood of purchasing lab-grown diamonds increases, the likelihood of purchasing natural diamonds decreases. This inverse relationship highlights a clear trade-off in consumer preferences between the two options when customization is emphasized.

Table 54 Correlation Between Preferences for Lab-Grown and Natural Diamonds (Customization Strategy)

Pair	N	Correlation (r)	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	213	-0.273	< .001	< .001

The effect size was moderate (Cohen’s  $d = 0.389, 95\% \text{ CI: } [0.249, 0.528]$ ), indicating a meaningful difference in preference. This suggests that the ability to customize lab-grown diamonds had a substantial impact on participants' purchasing intentions, making it a strong factor in their decision-making process.

Table 55 Effect Sizes for Customization Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen’s $d$	1.847	0.389	0.249	0.528

Hedges' <i>g</i>	1.853	0.388	0.248	0.526
------------------	-------	-------	-------	-------

*Celebrity Strategy*

It is shown that participants were slightly more likely to purchase a lab-grown diamond (Mean = 3.32) compared to a natural diamond (Mean = 3.04) when considering the association of natural diamonds with celebrity endorsements and their image as symbols of elegance and exclusivity. The mean difference of 0.277 suggests a modest preference for lab-grown diamonds in this context. The paired samples t-test confirmed this difference as statistically significant ( $t = 2.263$ ,  $p = 0.025$ ), with a 95% confidence interval for the mean difference ranging from 0.036 to 0.518.

Table 56 Descriptive Statistics for Celebrity Strategy

Condition	Mean ( <i>M</i> )	<i>N</i>	Standard Deviation ( <i>SD</i> )	Standard Error Mean ( <i>SE</i> )
Lab-Grown Diamond Preference	3.32	213	1.117	0.077
Natural Diamond Preference	3.04	213	1.297	0.089

Table 57 Paired Samples t-Test for Prestige Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	<i>t</i>	<i>df</i>	One-Sided <i>p</i>	Two-Sided <i>p</i>
Lab-Grown vs. Natural Diamond Preference	0.277	1.787	0.122	0.036	0.518	2.263	212	0.012	0.025

The correlation between the two variables was weak and negative ( $r = -0.091$ ,  $p = 0.187$ ), indicating that the likelihood of purchasing one type of diamond has little to no inverse relationship with the likelihood of purchasing the other when celebrity influence is emphasized.

Table 58 Correlation Between Preferences for Celebrity Strategy

Pair	<i>N</i>	Correlation ( <i>r</i> )	One-Sided <i>p</i>	Two-Sided <i>p</i>
Lab-Grown vs. Natural Diamond Preference	213	-0.091	0.093	0.187

The effect size was small (Cohen’s  $d = 0.155$ , 95% CI: [0.020, 0.290]), suggesting that the difference in preference is modest. This indicates that while celebrity endorsements do have an influence on consumer choices, it is not a particularly strong or significant factor in shaping preferences between lab-grown and natural diamonds.

Table 59 Effect Sizes for Prestige Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen’s $d$	1.787	0.155	0.020	0.290
Hedges’ $g$	1.793	0.154	0.020	0.289

*Ethical Production Strategy*

It is shown that participants were significantly more likely to purchase a lab-grown diamond (Mean = 3.85) compared to a natural diamond (Mean = 2.85) when considering the ethical production of lab-grown diamonds, which avoids the environmental and social issues associated with traditional diamond mining. The mean difference of 0.995 indicates a strong preference for lab-grown diamonds under these ethical considerations. This difference was confirmed as statistically significant ( $t = 7.482$ ,  $p < 0.001$ ), with a 95% confidence interval for the mean difference ranging from 0.733 to 1.258.

Table 60 Descriptive Statistics for Ethical Production Strategy

Condition	Mean (M)	N	Standard Deviation (SD)	Standard Error Mean (SE)
Lab-Grown Diamond Preference	3.85	213	1.123	0.077
Natural Diamond Preference	2.85	213	1.271	0.087

Table 61 Paired Samples t-Test for Ethical Production Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	$t$	$df$	One-Sided $p$	Two-Sided $p$
Lab-Grown vs. Natural Diamond Preference	0.995	1.941	0.133	0.733	1.258	7.482	212	< .001	< .001

The correlation between the likelihood of purchasing lab-grown and natural diamonds was moderate and negative ( $r = -0.313$ ,  $p < 0.001$ ), suggesting that as participants' likelihood of purchasing one type of diamond increased, their likelihood of purchasing the other decreased. This reflects a clear trade-off in consumer choices when ethical production is emphasized.

Table 62 Correlation Between Preferences for Ethical Production Strategy

Pair	N	Correlation (r)	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	213	-0.313	< .001	< .001

The effect size was large (Cohen's  $d = 0.513$ , 95% CI: [0.369, 0.655]), indicating that the observed preference for lab-grown diamonds is not only statistically significant but also practically meaningful. This suggests that emphasizing the ethical benefits of lab-grown diamonds has a substantial impact on consumer decision-making.

Table 63 Effect Sizes for Ethical Production Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen's $d$	1.941	0.513	0.369	0.655
Hedges' $g$	1.948	0.511	0.368	0.653

### Promotion Strategy

It is shown that participants were slightly more likely to purchase natural diamonds (Mean = 3.57, SD = 1.278) compared to lab-grown diamonds (Mean = 3.35, SD = 1.104) when both options were presented with the condition of natural diamonds being sold at a special discount. The mean difference of -0.216 between the two conditions was statistically significant ( $t = -1.717$ ,  $df = 212$ ,  $p = 0.044$ ), suggesting that the discount on natural diamonds influenced participants' preferences.

Table 64 Descriptive Statistics for Special Discount Strategy

Condition	Mean (M)	N	Standard Deviation (SD)	Standard Error Mean (SE)
Lab-Grown Diamond Preference	3.35	213	1.104	0.076
Natural Diamond Preference	3.57	213	1.278	0.088

Table 65 Paired Samples t-Test for Special Discount Strategy

Comparison	Mean Difference	Standard Deviation	Standard Error Mean	95% CI (Lower)	95% CI (Upper)	t	df	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	-0.216	1.835	0.126	-0.464	0.032	-1.717	212	0.044	0.087

However, the effect size was small (Cohen’s  $d = -0.118$ ), indicating that while the discount had an impact on purchase likelihood, the magnitude of the effect was minimal.

Table 66 Effect Sizes for Special Discount Strategy

Effect Size Metric	Standardizer	Point Estimate	95% CI (Lower)	95% CI (Upper)
Cohen’s $d$	1.835	-0.118	-0.252	0.017
Hedges’ $g$	1.842	-0.117	-0.251	0.017

The negative correlation ( $r = -0.182$ ,  $p = 0.008$ ) further supports this, showing a weak inverse relationship between the likelihood of purchasing lab-grown and natural diamonds under these conditions. Overall, while there is a statistically significant preference for discounted natural diamonds, the practical significance is limited, suggesting that other factors may play a more substantial role in shaping consumer choices.

Table 67 Correlation Between Preferences for Special Discount Strategy

Pair	N	Correlation (r)	One-Sided p	Two-Sided p
Lab-Grown vs. Natural Diamond Preference	213	-0.182	0.004	0.008

### 5.5.3. Testing the Overall Effectiveness of Marketing Strategies on Purchasing Intentions for Lab-Grown vs. Natural Diamonds

To test the hypotheses and evaluate the overall effect of marketing strategies—rather than just the impact of individual strategies—linear regression analyses were conducted. The first analysis examined the effect of marketing strategies on purchasing intentions for lab-grown diamonds, followed by the same analysis for natural diamonds.

#### a) *Linear Regression for Lab-Grown Diamonds*

A linear regression was conducted to assess the relationship between overall marketing strategies and the likelihood of purchasing lab-grown diamonds. As shown in the model summary, the correlation coefficient between "Overall\_Likely\_Purchase\_Lab" and "Marketing\_Strategy\_Overall" is 0.527, indicating a moderate positive relationship between the two variables.

Table 68 *Pearson Correlation Between Overall Likely Purchase and Marketing Strategy*

Variable	Overall_Likely_Purchase_Lab	Marketing_Strategy_Overall
<b>Pearson Correlation</b>	1.000	.527
<b>Marketing Strategy Overall</b>	.527	1.000
<b>Significance (1-tailed)</b>	—	< .001
<b>Marketing Strategy Overall</b>	.000	—
<b>N</b>	213	213

The R-squared value of 0.277 suggests that marketing strategies explain 27.7% of the variance in purchasing intention, which shows a meaningful impact but not a dominant one. The regression model's F-value of 80.991 with a p-value < 0.001 indicates that the model is statistically significant overall.

Table 69 *Model Summary of Linear Regression for Lab-Grown Diamonds*

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of Estimate	R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change
1	.527	.277	.274	.82110	.277	80.991	1	211	< .001

The coefficients table reveals that the Beta coefficient for marketing strategy is 0.797, meaning that for each one-point increase in marketing strategy, the likelihood of purchasing lab-grown

diamonds increases by 0.797. The p-value of <0.001 confirms the association is statistically significant. The Tolerance values (1.000) and VIF values (1.000) indicate no multicollinearity, confirming that the independent variable does not overlap with other predictors. The residuals statistics indicate that the model’s predictions are accurate with no major outliers.

Table 70 Regression Coefficients for Lab-Grown Diamonds

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Zero-order	Partial	Part	Collinearity Statistics
	B	Std. Error	Beta					Tolerance
1	(Constant)	.883	.303	—	2.908	.004	—	—
	Marketing_Strategy_Overall	.797	.089	.527	8.999	<.001	.527	.527

In conclusion, marketing strategies significantly influence purchasing intentions for lab-grown diamonds. While the R-squared value indicates that marketing strategies explain a moderate portion of the variance, the results align with the theory that favorable marketing strategies lead to increased purchasing likelihood, supporting the hypothesis of the analysis.

*b) Linear Regression for Natural Diamonds*

A linear regression was conducted to examine the relationship between overall marketing strategies and the likelihood of purchasing natural diamonds. The descriptive statistics show that the mean for "Overall\_Likely\_Purchase\_Natural" is 3.1690, indicating that, on average, participants are slightly more likely than neutral to purchase natural diamonds. The mean for "Marketing\_Strategy\_Overall" is 3.3677, suggesting that participants perceive the marketing strategies as slightly favorable. The standard deviations of 1.12161 for purchase likelihood and 0.63683 for marketing strategy perception show some variability, with purchase likelihood having a wider spread.

Table 71 Descriptive Statistics for Purchasing and Marketing Strategy

Variable	Mean	Std. Deviation
Overall Likely Purchase (Natural Diamonds)	3.1690	1.12161
Marketing Strategy Overall	3.3677	0.63683

The correlation analysis revealed a Pearson correlation coefficient of 0.683, signifying a moderate to strong positive relationship between marketing strategies and the likelihood of purchasing natural diamonds. With a p-value < 0.001, this correlation is statistically significant, confirming that more favorable marketing strategies are associated with higher likelihood of purchasing natural diamonds.

Table 72 Pearson Correlation Between Overall Likely Purchase and Marketing Strategy

Variable	Overall_Likely_Purchase_Natural	Marketing_Strategy_Overall
<b>Pearson Correlation</b>	1.000	.683
<b>Marketing Strategy Overall</b>	.683	1.000
<b>Significance (1-tailed)</b>	—	< .001
<b>Marketing Strategy Overall</b>	.000	—
<b>N</b>	213	213

The regression analysis shows an R-squared value of 0.467, indicating that 46.7% of the variation in the likelihood of purchasing natural diamonds can be explained by marketing strategies. This is a stronger explanatory power compared to the lab-grown diamond model (27.7%), suggesting that marketing strategies have a greater influence on natural diamond purchase decisions. The Beta coefficient of 1.203 indicates that for each unit increase in marketing strategy, the likelihood of purchasing natural diamonds increases by 1.203 units. The t-value of 13.586 and p-value of < 0.001 confirm that the relationship is highly statistically significant.

Table 73 Model Summary of Linear Regression for Natural Diamonds

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of Estimate	R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change
1	.683	.467	.464	.82110	.467	184.575	1	211	< .001

The ANOVA results show an F-value of 184.575 with a p-value < 0.001, confirming that the model is statistically significant and marketing strategies significantly explain the variability in purchase likelihood. The Adjusted R<sup>2</sup> of 0.464 indicates that the model is well-fitted, without overfitting.

Table 74 ANOVA Summary for Natural Diamonds

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	124.440	1	124.440	184.575	< .001
Residual	142.256	211	.674		
Total	266.697	212			

Regarding multicollinearity, the Tolerance value of 1.000 and VIF of 1.000 show no issues, which is expected as only one independent variable is used. The residuals statistics reveal that the predicted values range from 0.32 to 5.13, with a mean of 3.1690, closely matching the observed data. The residuals range from -1.72669 to 2.27331, with a mean close to zero, showing no major bias in predictions. The standardized residuals range from -2.103 to 2.769, indicating no extreme outliers.

*Table 75 Residuals Statistics for Natural Diamonds*

<b>Statistic</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
<b>Predicted Value</b>	0.3206	5.1328	3.1690	0.76615	213
<b>Residual</b>	-1.72669	2.27331	0.00000	0.81916	213
<b>Std. Predicted Value</b>	-3.718	2.563	0.000	1.000	213
<b>Std. Residual</b>	-2.103	2.769	0.000	0.998	213

In conclusion, marketing strategies are a significant predictor of the likelihood of purchasing natural diamonds, with the regression model explaining 46.7% of the variation in purchasing decisions. The results indicate a strong and positive impact of marketing strategies, confirming that favorable marketing strategies significantly increase the likelihood of purchasing natural diamonds.

#### 5.5.4. Testing The Hypothesis Including Control Variables

To isolate the influencing factors, the hypothesis was tested using control variables to assess how different variables impact the dependent variable (*purchasing intention*). This approach helps determine the unique effect of each variable while accounting for potential confounding influences.

##### 5.5.4.1. Identifying Control Variables

These control variables were included to account for demographic and socioeconomic influences on purchasing intention.

Table 76 Control Variables Used in the Analysis

Variable	Description
<b>Gender</b>	Participant's self-identified gender
<b>Age</b>	Participant's age in years
<b>Income</b>	Participant's income level
<b>Location</b>	Geographic region or place of residence

##### 5.5.4.2. Linear Regression Analysis With Control Variables for Lab-Grown Diamonds

The coefficients table 78 provides a detailed look at the relationship between the control variables and purchasing intention for lab diamonds:

**1. Gender:**  $B = 0.216, p = 0.038$

Gender is a statistically significant predictor of purchasing intention. The positive coefficient suggests that females are more likely to purchase lab diamonds compared to males. This result is significant at the 5% level, indicating that gender plays an important role in the purchasing decision for lab diamonds.

**2. Annual Income:**  $B = -0.133, p = 0.014$

Income has a negative relationship with purchasing intention, meaning that as annual income increases, the likelihood of purchasing lab diamonds decreases slightly. This

relationship is statistically significant, suggesting that higher-income individuals may have different purchasing preferences or priorities when it comes to lab diamonds.

**3. Age:**  $B = -0.058, p = 0.227$

Age does not have a statistically significant effect on purchasing intention. Although the coefficient suggests a slight decrease in the likelihood of purchasing lab diamonds as age increases, the p-value of 0.227 indicates that this relationship is not significant at the 5% level. Therefore, age does not appear to be a meaningful predictor of purchasing intention for lab diamonds in this model.

**4. Location:**  $B = -0.048, p = 0.320$

Location does not significantly affect purchasing intention. The negative coefficient indicates a slight decrease in purchasing intention based on location, but since the p-value is greater than 0.05, this relationship is not statistically significant. Therefore, location does not appear to be a significant factor in predicting purchasing behavior for lab diamonds.

*Table 77 Regression Results: Control Variables and Lab-Grown Diamond Purchasing Intention*

Predictor	Coefficient (B)	p-value	Significance
Gender	0.216	0.038	✓ (Significant)
Income	-0.133	0.014	✓ (Significant)
Age	-0.058	0.227	✗ (Not Significant)
Location	-0.048	0.320	✗ (Not Significant)

The regression analysis shows that gender and income are significant predictors of the likelihood of purchasing lab diamonds, with females being more likely to make a purchase and individuals with higher income being slightly less likely to do so. However, age and location do not have a statistically significant impact on purchasing intention in this model.

Overall, the model explains 32.7% of the variance in purchasing intention, suggesting that while the control variables provide valuable insight, other factors not included in the analysis might also influence purchasing decisions for lab diamonds.

Table 78 Regression Coefficients for Control Variables and Purchasing Intention (Lab-Grown Diamonds)

Predictor Variable	B	Std. Error	Beta	t	p-value	Statistical Significance
<b>Constant</b>	0.953	0.365	—	2.612	0.010	Significant (p < .05)
<b>Marketing Strategy Overall</b>	0.854	0.090	0.564	9.531	< .001	Significant (p < .001)
<b>Location</b> (Where do you currently live?)	-0.048	0.048	-0.060	-0.996	0.320	Not significant
<b>Annual Income</b>	-0.133	0.054	-0.148	-2.467	0.014	Significant (p < .05)
<b>Age</b>	-0.058	0.048	-0.072	-1.213	0.227	Not significant
<b>Gender</b> (What is your gender?)	0.216	0.103	0.122	2.091	0.038	Significant (p < .05)

#### 5.5.4.3. Linear Regression Analysis With Control Variables for Natural Diamonds

The coefficients table 80 provides a detailed look at the relationship between the control variables and purchasing intention for natural diamonds:

**1. Gender:** B = -0.216, p = 0.038

Gender is a statistically significant predictor of purchasing intention for natural diamonds. The negative coefficient indicates that females are less likely to purchase natural diamonds compared to males. This result is significant at the 5% level, meaning that gender plays a role in purchasing decisions for natural diamonds.

**2. Annual Income:** B = 0.133, p = 0.014

Income has a positive relationship with purchasing intention, meaning that as annual income increases, the likelihood of purchasing natural diamonds increases slightly. This relationship is statistically significant, suggesting that individuals with higher incomes may be more inclined to purchase natural diamonds.

**3. Age:** B = 0.058, p = 0.227

Age does not have a statistically significant effect on purchasing intention. Although the coefficient suggests a slight increase in the likelihood of purchasing natural diamonds as age increases, the p-value of 0.227 indicates that this relationship is not

significant at the 5% level. Therefore, age does not appear to be a meaningful predictor of purchasing intention for natural diamonds in this model.

4. **Location:**  $B = 0.048$ ,  $p = 0.320$

Location does not significantly affect purchasing intention. The positive coefficient indicates a slight increase in purchasing intention based on location, but since the p-value is greater than 0.05, this relationship is not statistically significant. Therefore, location does not appear to be a significant factor in predicting purchasing behavior for natural diamonds.

Table 79 Regression Results: Control Variables and Natural Diamond Purchasing Intention

Predictor	Coefficient (B)	p-value	Significance
Gender	-0.216	0.038	✓ (Significant)
Income	0.133	0.014	✓ (Significant)
Age	0.058	0.227	✗ (Not Significant)
Location	0.048	0.320	✗ (Not Significant)

The regression analysis shows that gender and annual income are significant predictors of the likelihood of purchasing natural diamonds. Specifically, males are more likely to purchase natural diamonds compared to females, and individuals with higher incomes are more likely to purchase natural diamonds. However, age and location do not have a statistically significant impact on purchasing intention in this model.

Overall, the model explains 50.3% of the variance in purchasing intention, suggesting that while the control variables provide valuable insight, other factors not included in this analysis might also influence purchasing decisions for natural diamonds.

Table 80 Regression Coefficients for Control Variables and Purchasing Intention (Lab-Grown Diamonds)

Predictor Variable	B	Std. Error	Beta	t	p-value	Statistical Significance
Constant	-0.953	0.365	—	-2.612	0.010	Significant ( $p < .05$ )

<b>Marketing Strategy Overall</b>	1.146	0.090	0.651	12.802	< .001	Significant (p < .001)
<b>Location</b> (Where do you currently live?)	0.048	0.048	0.052	0.996	0.320	Not significant
<b>Annual Income</b>	0.133	0.054	0.127	2.467	0.014	Significant (p < .05)
<b>Age</b>	0.058	0.048	0.062	1.213	0.227	Not significant
<b>Gender</b> (What is your gender?)	-0.216	0.103	-0.105	-2.091	0.038	Significant (p < .05)

#### 5.5.4.4. Key Differences Between the Two Regressions: Lab vs. Natural Diamonds

The analysis reveals distinct effects of gender and income on purchasing intentions for lab-grown diamonds compared to natural diamonds. The key differences are outlined below.

##### Gender Differences:

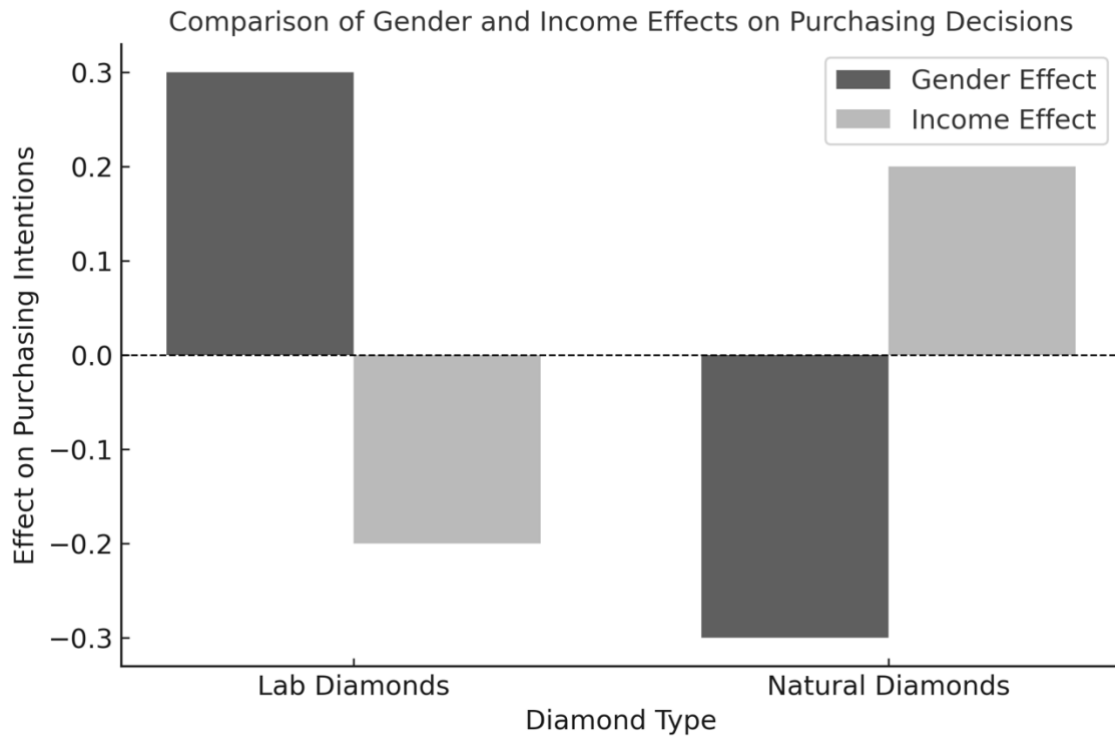
For lab-grown diamonds, the gender coefficient is positive, indicating that females are more likely to purchase. For natural diamonds, the coefficient is negative, meaning females are less likely to buy them.

##### Income Differences:

Income has opposite effects on purchasing behavior. For lab-grown diamonds, it shows a negative relationship, while for natural diamonds, the relationship is positive, meaning higher-income individuals prefer natural diamonds.

Below is a bar chart comparing the effects of gender and income on purchasing intentions for lab-grown and natural diamonds. The **dark grey** bars represent the **gender effect**, while the **light grey** bars represent the **income effect**. The chart clearly shows the opposite trends for each type of diamond. Let me know if you need any modifications!

Figure 23 Effects of Gender and Income on Diamond Purchases



Q- Dark grey: Gender effect | Light grey: Income effect

## 6 Discussion

### 6.1. Discussion of Hypothesis Testing

The objective of this study was to determine whether marketing strategies influence consumer purchasing intentions for lab-grown diamonds more than for natural diamonds. The hypothesis testing results indicate that while marketing strategies significantly impact purchasing decisions for both categories, their effect is stronger for natural diamonds than for lab-grown diamonds.

The results do not support the hypothesis that marketing strategies have a greater influence on lab-grown diamonds compared to natural diamonds. Instead, they suggest that marketing plays a more dominant role in shaping consumer preferences for natural diamonds. This is evident in the linear regression models, which show that marketing strategies explain a larger portion of the variance in purchasing intention for natural diamonds compared to lab-grown diamonds. As a result, the hypothesis “*Marketing strategies influence consumer purchasing intentions for lab-grown diamonds more than for natural diamonds.*“ is rejected.

To isolate the effect of marketing strategies, control variables such as gender, income, age, and location were included in the analysis. The results show that certain demographic factors influence purchasing decisions, further shaping the relationship between marketing strategies and consumer preferences.

The inclusion of control variables does not change the overall finding that marketing strategies have a stronger effect on natural diamonds. However, it reveals additional insights:

- Gender plays a significant role in purchasing behavior. Women are more likely to purchase lab-grown diamonds, while men are more likely to purchase natural diamonds. This suggests that the ethical and sustainability-focused marketing of lab-grown diamonds may resonate more with female consumers, whereas traditional marketing emphasizing exclusivity and prestige may be more effective for men.
- Income also has an opposing effect on purchasing decisions for lab-grown and natural diamonds. Higher-income individuals are more likely to purchase natural diamonds, while lower-income individuals are more likely to purchase lab-grown diamonds. This

supports the idea that natural diamonds continue to be perceived as a luxury item, whereas lab-grown diamonds may be seen as a more accessible alternative.

- Age and location do not significantly influence purchasing intentions in either category, indicating that marketing strategies affect consumers across different regions and age groups in a similar way.

The control variables highlight that marketing strategies interact with consumer demographics. While marketing remains a key driver of purchasing decisions, gender and income levels shape how consumers respond to marketing messages.

Taken together, the results reject the hypothesis that marketing strategies influence purchasing intentions for lab-grown diamonds more than for natural diamonds. Instead, marketing strategies have a stronger impact on natural diamonds, suggesting that traditional branding, emotional appeals, and legacy marketing continue to play a critical role in sustaining consumer demand.

These findings suggest that marketers need to tailor their strategies to different consumer segments. Lab-grown diamond marketing may benefit from a stronger emphasis on emotional storytelling and value-driven messaging, whereas natural diamond marketing should continue to reinforce exclusivity and status appeal to maintain its influence on purchasing decisions.

## **6.2. Discussion of Findings**

### *6.2.1. Demographic Insights and Consumer Awareness*

The demographic analysis revealed notable trends in consumer preferences based on factors such as income, geographic location, and purchasing history. The cross-tabulation results indicate that income level plays a significant role in diamond purchasing behavior. Higher-income individuals were more likely to purchase natural diamonds, while lower-income consumers showed a stronger inclination toward lab-grown diamonds. This suggests that affordability is a key determinant in purchasing decisions, aligning with the finding that price ranked as the second most important factor influencing consumer choice.

Geographic differences were also observed, with non-European respondents being more likely to have purchased diamonds compared to European participants. Additionally, respondents from non-European countries exhibited a higher preference for lab-grown diamonds compared to European respondents, who still showed a stronger inclination toward natural diamonds. These findings highlight the role of regional market differences in shaping consumer behavior.

When ranking factors influencing diamond purchasing decisions, appearance was the most important, followed by price and emotional significance. Interestingly, while sustainability is frequently emphasized in lab-grown diamond marketing, it ranked lower in importance, suggesting that while it is a factor, it may not be the primary driver of purchasing decisions. Brand reputation ranked the lowest, indicating that consumers are less influenced by well-known jewelry brands and more by tangible aspects such as aesthetics and cost.

These findings suggest that while lab-grown diamonds are gaining traction, traditional perceptions about natural diamonds remain strong, particularly among certain income and geographic groups. Marketing strategies must therefore be tailored to address these demographic differences, focusing on affordability for lower-income consumers and reinforcing the symbolic and emotional appeal of natural diamonds for high-income markets.

### *6.2.2. Consumer Preferences for Lab-Grown and Natural Diamonds Across Marketing Strategies*

The analysis of consumer purchase intentions across different marketing strategies revealed notable variations in consumer preferences for lab-grown and natural diamonds. Pricing emerged as a significant factor, with a strong majority indicating they were more likely to purchase a lab-grown diamond when aware of its lower cost compared to a natural diamond. However, a substantial proportion of respondents still preferred natural diamonds, underscoring the role of perceived authenticity and long-term value in purchasing decisions.

Environmental sustainability was another key influence, with a considerable number of participants favoring lab-grown diamonds due to their lower ecological impact. The findings suggest that while sustainability messaging resonates with many consumers, a portion remains committed to natural diamonds despite awareness of environmental concerns. Similarly, ethical

considerations played a strong role, with respondents demonstrating a clear preference for lab-grown diamonds when informed about the ethical issues surrounding diamond mining.

Conversely, emotional appeal and tradition continued to favor natural diamonds, as many consumers associated them with lasting love and exclusivity. Luxury branding and celebrity endorsements also reinforced the traditional appeal of natural diamonds, though a notable portion of respondents still considered lab-grown diamonds a viable alternative. Customization emerged as a compelling factor for lab-grown diamonds, with many consumers expressing a higher likelihood of purchase when customization options were emphasized.

Interestingly, limited-time discounts were more effective in increasing purchase likelihood for natural diamonds than for lab-grown ones. This suggests that while affordability is important, natural diamonds may require additional financial incentives to compete with the growing appeal of lab-grown alternatives.

Overall, the findings indicate that while lab-grown diamonds benefit from their affordability, ethical advantages, and customization potential, natural diamonds still hold strong appeal due to tradition, luxury perception, and emotional symbolism. Marketing strategies must, therefore, be carefully tailored to leverage these differing consumer priorities.

### *6.2.3. Effectiveness of Individual Marketing Strategies on Consumer Purchase Intentions*

Price had a notable impact on consumer preferences, with a clear advantage for lab-grown diamonds. When informed that lab-grown diamonds are visually identical to natural diamonds but cost less, respondents were significantly more likely to choose them. This highlights price sensitivity as a major driver of preference, particularly for cost-conscious consumers. In contrast, the price advantage did not significantly deter consumers from purchasing natural diamonds, suggesting that other factors, such as tradition or emotional attachment, play a role in their continued appeal.

The emphasis on environmental sustainability strongly favored lab-grown diamonds. When participants were made aware of the environmental benefits of lab-grown diamonds, they showed a marked increase in purchasing likelihood. Conversely, highlighting the environmental impact of natural diamonds reduced their attractiveness. These findings indicate

that sustainability messaging is highly persuasive, particularly for ethically conscious consumers, and represents a key differentiator between the two diamond types.

Emotional appeal had a moderate effect, slightly favoring natural diamonds. The emphasis on tradition and symbolism strengthened consumer preference for natural diamonds, reinforcing their status as a classic and meaningful purchase. However, the effect was not as pronounced as other strategies, and lab-grown diamonds remained a viable choice for a substantial portion of respondents. This suggests that while emotional significance influences purchasing behavior, it does not entirely overshadow other factors such as price or ethics.

Luxury branding and exclusivity had a minimal impact, with no significant difference in preference between the two diamond types. Despite the association of natural diamonds with high-end brands and rarity, consumers did not exhibit a strong bias toward them. This suggests that lab-grown diamonds are increasingly perceived as a legitimate option within the luxury market, diminishing the exclusivity advantage of natural diamonds.

Customization options had a strong impact, significantly increasing the appeal of lab-grown diamonds. The ability to personalize a diamond according to individual preferences emerged as a compelling factor, leading to a notable shift in purchasing likelihood toward lab-grown diamonds. Natural diamonds, lacking this flexibility, did not benefit from this strategy, reinforcing the importance of personalization as a marketing tool.

Celebrity endorsements and prestige had a relatively weak influence, with lab-grown diamonds maintaining a slight edge despite the emphasis on celebrity association with natural diamonds. This suggests that while endorsements may contribute to brand image, they do not decisively sway consumer preferences, as other factors such as affordability, ethics, and customization appear to hold greater weight.

Ethical considerations produced one of the strongest effects, significantly increasing the likelihood of purchasing lab-grown diamonds. Participants showed a clear preference for lab-grown diamonds when ethical benefits, such as avoiding the social and environmental consequences of traditional diamond mining, were emphasized. In contrast, natural diamonds were less favored when ethical concerns were highlighted, demonstrating that responsible production methods are a powerful driver of consumer choice.

Promotional discounts had a modest influence, slightly increasing the likelihood of purchasing natural diamonds. While discounts made natural diamonds more attractive to some consumers, the effect was relatively small compared to strategies focusing on ethics, sustainability, and customization. This suggests that while price reductions can generate short-term interest, they are not the most decisive factor in shaping long-term consumer preferences.

The findings highlight clear differences in the effectiveness of marketing strategies. Price, environmental sustainability, ethical production, and customization strongly favored lab-grown diamonds, making them the most impactful strategies for influencing consumer behavior. In contrast, emotional appeal and promotional discounts provided a moderate advantage for natural diamonds, while luxury branding and celebrity endorsements had minimal influence. These results suggest that marketing efforts for lab-grown diamonds should prioritize affordability, ethical considerations, and innovation, while traditional messaging about prestige and symbolism remains relevant for natural diamonds but is not as persuasive as other factors.

### **6.3. Limitations of the Study**

While this study provides valuable insights into the impact of marketing strategies on consumer purchase intentions for lab-grown and natural diamonds, several limitations should be acknowledged. These limitations primarily concern the research design, sample composition, and scope of factors considered, all of which may have influenced the findings.

One limitation relates to the generalizability of the results. The sample composition, while diverse in terms of gender and geographic location, was not evenly distributed across different demographic categories. The majority of participants belonged to younger age groups, particularly between 25 and 34 years old, with fewer respondents from older age brackets. This limits the ability to generalize findings to older consumers, who may have different purchasing habits or perceptions of diamonds. Additionally, the income distribution was skewed toward lower and middle-income groups, meaning that higher-income individuals—who are often key consumers of natural diamonds—were underrepresented. This could have affected responses related to price sensitivity and the perceived luxury value of diamonds.

Another key limitation is that most participants had never purchased a diamond before. The data revealed that 60.1% of respondents had never bought a diamond, while only 27.2% had purchased a natural diamond and 12.7% had bought a lab-grown diamond. This means that the majority of responses reflect hypothetical purchase intentions rather than actual consumer behavior. While this provides insight into potential future trends, stated intentions do not always translate into real purchases. Future research could incorporate actual purchase data or behavioral tracking to strengthen findings.

Additionally, the study relied on self-reported data, which is subject to biases such as social desirability bias or hypothetical bias. For example, while many respondents expressed a preference for lab-grown diamonds due to ethical and environmental reasons, it is uncertain whether they would maintain this preference in a real purchasing situation where brand prestige, emotional appeal, and external social influences may play a stronger role. Observational studies or industry sales data could provide a more accurate measure of actual consumer choices.

Lastly, another limitation is that the study examined marketing strategies in isolation, testing their individual effects on consumer preferences. While this approach allowed for a clear assessment of each strategy's impact, real-world purchasing decisions are influenced by

multiple overlapping factors. Consumers do not evaluate price, ethics, branding, and customization separately; rather, they consider them collectively. Future research could explore how these factors interact by employing conjoint analysis or experimental methods to simulate more realistic decision-making processes.

Despite these limitations, this study contributes valuable insights into consumer behavior and marketing strategy within the diamond industry. By acknowledging these constraints, future research can refine methodologies and expand the scope of analysis to enhance understanding of how marketing strategies influence consumer choices in this rapidly changing market.

## 7 Conclusion and Outlook

This study aimed to answer the question: *To what extent do marketing strategies influence consumer purchasing intentions for lab-grown versus natural diamonds in survey-based research, and which individual strategies have the greatest impact?*

The results indicate that marketing efforts significantly influence consumer preferences for both diamond types, although to different extents. The predictive strength of marketing was found to be greater for natural diamonds, suggesting that consumers who prefer them are more responsive to marketing messages. For lab-grown diamonds, external factors such as price sensitivity and ethical considerations appeared to play a more dominant role in shaping purchasing intentions.

Demographic differences further influenced purchasing behavior. Women showed a higher likelihood of purchasing lab-grown diamonds, while men exhibited a stronger preference for natural diamonds. Additionally, income levels played a role, with higher-income consumers favoring natural diamonds, while lower-income respondents showed a stronger inclination toward lab-grown alternatives. These insights suggest that marketing strategies should be tailored to different target groups to maximize their effectiveness.

*This section presents the findings related to the second part of the research question, focusing on the effectiveness of individual marketing strategies:*

### a) Most Influential Strategies for Lab-Grown Diamonds:

*Price Sensitivity:* Consumers showed a strong preference for lab-grown diamonds when informed that they look identical to natural diamonds but cost less. This highlights that affordability is a key driver for purchasing decisions.

*Ethical Considerations:* The strongest impact was observed when sustainability and ethical production were emphasized, confirming that consumers value the environmental and social benefits of lab-grown diamonds.

*Customization:* The ability to personalize lab-grown diamonds using advanced technology significantly increased consumer interest, showing that technological innovation can be a compelling selling point.

b) Most Influential Strategies for Natural Diamonds:

*Emotional Appeal & Tradition:* Consumers were more likely to favor natural diamonds when their symbolic value and tradition were emphasized. This suggests that heritage and perceived authenticity remain important factors in consumer decision-making.

*Luxury Branding & Exclusivity:* Associating natural diamonds with high-end brands and rarity was an effective motivator for consumers seeking prestige and social status.

*Promotional Discounts:* While price was a stronger driver for lab-grown diamonds, discounts and limited-time offers were effective in increasing the likelihood of purchasing natural diamonds.

Interestingly, *celebrity endorsements* did not have a substantial impact on purchasing decisions. While they influenced preferences slightly, consumers prioritized factors such as ethics, price, and tradition over celebrity affiliations.

This study examined the extent to which marketing strategies influence consumer purchasing intentions for lab-grown versus natural diamonds, identifying which strategies have the greatest impact. The findings confirm that marketing strategies play a crucial role in shaping consumer preferences, though their effectiveness varies. Price and ethical considerations significantly drive interest in lab-grown diamonds, while emotional appeal and exclusivity reinforce preference for natural diamonds.

A key contribution of this research is its direct comparison of marketing strategies for both diamond types, filling a gap in the existing literature. Unlike previous studies that assessed consumer behavior in isolation, this study provides a more comprehensive understanding of how marketing influences purchasing decisions across both categories. The results highlight the importance of tailoring marketing messages to different consumer segments, emphasizing that younger consumers are more inclined toward lab-grown diamonds, particularly when sustainability and affordability are promoted, whereas older demographics respond more strongly to traditional branding strategies.

These insights have practical implications for businesses in the diamond industry. Traditional jewelers can use the findings to reinforce the value of natural diamonds through exclusivity

and emotional branding, while lab-grown diamond retailers can focus on ethical messaging, customization, and affordability to attract their target audience.

While this study has provided meaningful insights, future research can build upon these findings by exploring the interplay of multiple marketing strategies rather than assessing them in isolation. As noted in the *Limitations* (Section 6.3), real-world purchasing decisions are influenced by the simultaneous interaction of various marketing factors, and future studies could examine how these strategies combine to shape consumer behavior. Additionally, conducting experimental or longitudinal studies could offer deeper insights into how marketing influences purchasing behavior over time.

Another avenue for future research is the role of cultural and regional differences in shaping consumer preferences. While this study explored demographic differences, further investigations could analyze how economic and cultural factors influence attitudes toward lab-grown versus natural diamonds in different markets. Such insights would further refine the industry's approach to tailoring marketing strategies across global audiences.

Ultimately, this study contributes to the growing body of research on consumer behavior in the diamond industry and provides valuable recommendations for marketers, retailers, and industry stakeholders. As consumer preferences continue to evolve, staying ahead of emerging trends and adapting marketing strategies accordingly will be essential for maintaining competitiveness in both the natural and lab-grown diamond markets.

## References

- Bagathi, A. K., Balagtas, C., Boppana, S. V. K., Coste-Manière, I., & Vincent, F. (2021). Lab-grown diamond—The shape of tomorrow's jewelry. In F. Vincent & I. Coste-Manière (Eds.), *Sustainable luxury and jewelry* (pp. 45–60). Springer Singapore. [https://doi.org/10.1007/978-981-16-3250-3\\_4](https://doi.org/10.1007/978-981-16-3250-3_4)
- Bartels, C. and Morelli, S. (2020). A tale of two countries: The long shadow of the crisis on income and wealth in Germany and Italy. *Journal of Modern European History*, 19(1), pp.33–39. doi:<https://doi.org/10.1177/1611894420974299>.
- Bataleva, Y.V. and Palyanov, Y.N. (2023). Diamond Formation via Carbonate or CO<sub>2</sub> Reduction under Pressures and Temperatures of the Lithospheric Mantle: Review of Experimental Data. *Minerals*, 13(7), p.940. doi:<https://doi.org/10.3390/min13070940>.
- Bates, R. (2021). *Consumers View Natural, Lab-Grown Diamonds Differently, Says De Beers*. JCK. <https://www.jckonline.com/editorial-article/consumers-natural-lab-growns/>.
- Bates, R. (2024, March 12). Lab-grown diamonds make strong showing in *The Knot* survey. JCK <https://www.jckonline.com/editorial-article/lab-grown-diamonds-the-knot/>
- BrighterClick. (2023). *18 Emotional Marketing Statistics: Data That Proves Emotions Drive Consumer Behavior*.
- Butcher, A. (2023). *Lab-Grown Diamond Pricing*. International Gem Society.
- Butcher, A. (2024). *A Brief History of Lab-Grown Diamonds*. International Gem Society. <https://www.gemsociety.org/article/brief-history-of-lab-grown-diamonds/>.
- Cheah, I., Shimul, A.S. and Parker, J. (2021). Guest Editorial: Luxury Branding – Strategy, Innovation and Sustainability. *Australasian Marketing Journal*, 29(4), pp.275–276. doi:<https://doi.org/10.1177/18393349211052617>.
- Chew, S. (2024). *SCMP*. South China Morning Post. Available at: <https://www.scmp.com/economy/economic-indicators/article/3263103/chinas-diamond-industry-having-hard-time-any-way-you-cut-it-more-consumers-go-gold>

*communication research: Qualitative and quantitative methodologies*, 209-234.

Danziger, P.N. (2018). What The FTC Diamond Ruling Means For Consumers And Diamond Marketers. *Forbes*. 2 Aug. <https://www.forbes.com/sites/pamdanziger/2018/08/02/what-the-ftc-diamond-ruling-means-for-consumers-and-diamond-marketers/>.

Debenedetti, A. (2021). Luxury stores as home-like places: How domestic meanings are staged and mobilized in luxury retail. *Journal of Business Research*, 129, pp.304–313. doi:<https://doi.org/10.1016/j.jbusres.2021.03.010>.

Diamond Insight Report (2022). *New research highlights key trends shaping how younger generations perceive, research and buy diamonds*. [www.debeersgroup.com](http://www.debeersgroup.com). <https://www.debeersgroup.com/media/company-news/2022/new-research-highlights-key-trends-shaping-how-younger-generations-perceive-diamonds>.

Elhefnawy, N. (2022). The Declining Economic Viability of the Single-Income Household: A Note on the Fortunes of the Middle Class. *SSRN Electronic Journal*. doi:<https://doi.org/10.2139/ssrn.4088459>.

Fortune Business Insights. (2024). *Diamond market size, share, growth and forecast [2024-2032]*. Fortune Business Insights. <https://www.fortunebusinessinsights.com/diamond-market-102887>

Francis-Tan, A. and Mialon, H.M. (2014). *'A Diamond is Forever' and Other Fairy Tales: The Relationship between Wedding Expenses and Marriage Duration*. [papers.ssrn.com](http://papers.ssrn.com).

Gomelsky, V. (2022). In Jewelry, Mini Meets Maxi. *The New York Times*. 5 Dec. <https://www.nytimes.com/2022/12/05/fashion/jewelry-mini-maxi-trends.html>.

Gunter, B. (2002). The quantitative research process. *A handbook of media and*

Hughes, S.M. (2021). Engagement Rings as Modern Commitment Cue. *Springer eBooks*, pp.2347–2351. doi: [https://doi.org/10.1007/978-3-319-19650-3\\_3656](https://doi.org/10.1007/978-3-319-19650-3_3656).

Ignite Sales. (2020). *95% of Purchasing Decisions are Subconscious*. <https://ignitesales.com/blog/95-of-purchasing-decisions-are-emotional/>

- Ioannou, I., & Mickshik, N. (2023). *Lark & Berry: The diamond disruptors*. London Business School. <https://publishing.london.edu/cases/lark-berry-the-diamond-disruptors/>
- Jaganmohan, M. (2024). *Value growth of the diamond jewelry market worldwide 2020*. Statista. Available at: <https://www.statista.com/statistics/274924/worldwide-production-of-rough-diamonds/>.
- Keech, J., Morrin, M., & Podoshen, J. S. (2020). The effects of materialism on consumer evaluation of sustainable synthetic (lab-grown) products. *Journal of Consumer Marketing*, 37(5), 579–590. <https://doi.org/10.1108/JCM-09-2018-2876>
- Linda, A. (2023). The Acculturation Process of New Products through Known Products. Interpreting Ethical Certification of Diamonds through the Lens of Organic Food Produced in Italy. *Luxury*, pp.1–23. [doi.org/10.1080/20511817.2022.2205044](https://doi.org/10.1080/20511817.2022.2205044).
- Liu, T. (2024, November 5). *An ethical and environmental comparison of lab-grown and mined diamonds*. <https://www.researchgate.net/publication/368765432> An Ethical and Environmental Comparison of Lab-Grown and Mined Diamonds
- Lodha, N. (2024). *The future of e-commerce in lab-grown diamonds: A sustainable luxury market analysis*. Chitrangana.com. <https://www.researchgate.net/publication/385849953> The Future of E-Commerce in Lab-Grown Diamonds A Sustainable Luxury Market Analysis - Research and Strategy Document by Chitranganacom
- Ma, Y., Qiu, Z., Deng, X., Ding, T., Li, H., Lu, T., Song, Z., Zhu, W. and Wu, J. (2022). Chinese Colorless HPHT Synthetic Diamond Inclusion Features and Identification. *Crystals*, 12(9), pp.1266–1266. doi:<https://doi.org/10.3390/cryst12091266>.
- Malhotra, K. (2024). *Queen Elizabeth II: The Most Remarkable Jewels, Tiaras, and Crowns*. Empowordjournalism.com. Available at: <https://www.empowordjournalism.com/all-articles/features/queen-elizabeth-ii-the-most-remarkable-jewels-tiaras-and-crowns/>
- Marquis, I. (2024). *The Rapid Rise and Fall of Lab-Grown Diamonds - Bell & Brunt*. Bell & Brunt. <https://bellandbrunt.com.au/blog/the-rapid-rise-and-fall-of-lab-grown-diamonds/>.

McKinsey & Company (2023). *Consumers care about sustainability—and back it up with their wallets*. McKinsey & Company. <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/consumers-care-about-sustainability-and-back-it-up-with-their-wallets>.

Mihailovich, P., Taylor, C., & Brunschweiler, A. (2021). The future star in gems? Can lab-grown diamonds add value to luxury brands? *Journal of Gems & Gemmology*, 23(6), 58–73. <https://doi.org/10.15964/j.cnki.027jgg.2021.06.006>

Murphy, H., Biesheuvel, T., & Elmquist, S. (2015, August 27). Want to make a diamond in just 10 weeks? Use a microwave. *Bloomberg Businessweek*. <https://www.bloomberg.com/news/features/2015-08-27/want-to-make-a-diamond-in-just-10-weeks-use-a-microwave>

Natural Diamond Council (2024). *How a Generic Marketing Strategy is Captivating Consumers on the Values of Natural Diamonds - SPONSOR CONTENT FROM NATURAL DIAMOND COUNCIL*. Harvard Business Review. <https://hbr.org/sponsored/2024/03/how-a-generic-marketing-strategy-is-captivating-consumers-on-the-values-of-natural-diamonds>.

Phakiti, A. (2015). Quantitative research and analysis. *Research methods in applied linguistics: A practical resource*. Bloomsbury.

Philippe, M., Caroline, T. and Alane, B. (2021). *The Future Star in Gems? Can Lab-Grown Diamonds Add Value to Luxury Brands?* *Journal of Gems & Gemmology*. <http://jogg.cug.edu.cn/article/doi/10.15964/j.cnki.027jgg.2021.06.006>.

Purinton, E. F. (2012). Consumer attitudes regarding artificial diamonds. *Journal of Business and Behavioral Sciences*, 24(2), 115–126. [https://scholar.stjohns.edu/cgi/viewcontent.cgi?article=1481&context=theses\\_dissertations](https://scholar.stjohns.edu/cgi/viewcontent.cgi?article=1481&context=theses_dissertations)

Quamina, L.T., Xue, M.T. and Chawdhary, R. (2023). ‘Co-branding as a Masstige Strategy for Luxury brands: Desirable or not?’ *Journal of Business Research*, 158(0148-2963), p.113704.

- Sabanoglu, T. (2024). *Consumer awareness of lab-grown diamonds U.S. 2018*. Statista. <https://www.statista.com/statistics/1076251/consumer-awareness-of-lab-grown-diamonds-us/>.
- Schulte, M., Balasubramanian, S. and Paris, C.M. (2021). Blood Diamonds and Ethical Consumerism: An Empirical Investigation. *Sustainability*, 13(8), p.4558. doi:<https://doi.org/10.3390/su13084558>.
- Shields, C.L. and Shields, J.A. (2021). Diamonds are forever... and so are case reports. *Indian Journal of Ophthalmology - Case Reports*, 1(1), pp.2–3. doi:[https://doi.org/10.4103/ijo.ijo\\_3737\\_20](https://doi.org/10.4103/ijo.ijo_3737_20).
- Shukla, P., Rosendo-Rios, V., Trott, S., Lyu, J. (Daisy) and Khalifa, D. (2022). Managing the Challenge of Luxury Democratization: a Multicountry Analysis. *Journal of International Marketing*, 30(4), p.1069031X2211269. doi:<https://doi.org/10.1177/1069031x221126925>.
- Siegel, D., Spapens, T. and van Uhm, D. (2020). Regulators and villains: the dual role of private actors in diamonds and caviar. *Crime, Law and Social Change*. doi:<https://doi.org/10.1007/s10611-020-09902-5>.
- Southern Jewelry News (2022). *Lab-grown diamonds poised for major growth*. SCS Global Services. Available at: <https://www.scsglobalservices.com/news/lab-grown-diamonds-poised-for-major-growth>.
- Statista Research Department (2016). *Diamond price history 1960-2016 | Statista*. Statista. <https://www.statista.com/statistics/279053/worldwide-sales-of-polished-diamonds/>.
- Sun, Y., Jiang, S. and Wang, S. (2024). The environmental impacts and sustainable pathways of the global diamond industry. *Humanities and Social Sciences Communications*, 11(1), pp.1–12. doi:<https://doi.org/10.1057/s41599-024-03195-y>.
- Sun, Y., Jiang, S., & Wang, S. (2024). The environmental impacts and sustainable pathways of the global diamond industry. *Humanities and Social Sciences Communications*, 11(1), 1–10. <https://doi.org/10.1057/s41599-024-03195-y>

- Tenuta, L., Testa, S., Antinarelli Freitas, F. and Cappellieri, A. (2024). Sustainable Materials for Jewelry: Scenarios from a Design Perspective. *Sustainability*, 16(3), p.1309. doi:<https://doi.org/10.3390/su16031309>.
- Treadgold, T. (2024). Diamond Mining Losing Its Sparkle As Lab-Grown Market Share Rises. *Forbes*. 26 Sep. <https://www.forbes.com/sites/timtreadgold/2024/09/23/diamond-mining-losing-its-sparkle-as-lab-grown-market-share-rises/>.
- Udokwu, C., Zimmermann, R., Norta, A., Brandtner, P., Kormiltsyn, A. and Aroh, S.M. (2023). Exerting Qualitative Analytics and Blockchain Requirement-Engineering in Designing and Implementing a Luxury Products Authentication System. *Inventions*, 8(1), p.49. doi:<https://doi.org/10.3390/inventions8010049>.
- Véronique Pouillard (2024). An antitrust case in the diamond industry: The United States v. the De Beers cartel (1948). *Business history*, pp.1–21. doi:<https://doi.org/10.1080/00076791.2024.2340621>.
- Vladislav Zhdanov, Andrzejewski, L., Bondareva, J. and Stanislav Evlashin (2024). Comparative analysis: CapEx in diamond mining versus diamond growing, based on open data sources and experimental results. *Heliyon*, 10(12), pp.e32817–e32817. doi:<https://doi.org/10.1016/j.heliyon.2024.e32817>.
- Wang, X., Sung, B. and Phau, I. (2024). How rarity and exclusivity influence types of perceived value for luxury. *Journal of brand management*, 31. doi:<https://doi.org/10.1057/s41262-024-00359-8>.
- Wexler, A. (2019). *De Beers Diamonds Reflect a Changing Market*. WSJ. Available at: <https://www.wsj.com/articles/de-beers-diamonds-reflect-a-changing-market-11575109800>.
- White, K. (2024). *Exploring the history of diamonds*. Canadian Mining Journal. Available at: <https://www.canadianminingjournal.com/featured-article/exploring-the-history-of-diamonds/>.
- Xu, J. (2024). Prediction on the Prices of Laboratory-Grown Diamonds based on Multiple Linear Regression Model. *Highlights in Business Economics and Management*, 35, pp.101–107. doi:<https://doi.org/10.54097/8yaq7c77>.

Yin, C.-C., Tang, Y.-C., Chiu, H.-C., Hsieh, Y.-C. and Lai, Y.-T. (2023). Telling an authentic story by aligning with your product type and price. *Journal of Business Research*, 161, p.113799. doi:<https://doi.org/10.1016/j.jbusres.2023.113799>.

## Appendix A – Survey Questionnaire

*Figure 24 Introduction*

Hello,

This survey is part of my master's degree at LUISS Guido Carli in Rome and will take less than 5 minutes to complete.

Your responses will remain confidential and will be deleted after the thesis is finished.

Thank you for your time!

Nora

*Figure 25 Prior Diamond Purchase History*

Q1. Have you ever purchased a diamond?

No

Yes, a natural diamond

Yes, a lab-grown diamond

*Figure 26 Knowledge of Diamond Types*

Q2. Do you know the difference between lab-grown and natural diamonds?

Yes

No

Figure 27 Diamond Purchase Preference

Q3. If you had to buy a diamond now, which type of diamond are you more likely to buy?

Lab-grown diamond

Natural diamond

Figure 28 Ranking Factors in Diamond Purchase Decision

Q4. Rank these factors from most important to least important when choosing a diamond.

How it looks (Is it beautiful and sparkly?)

How much it costs (Is it affordable?)

How eco-friendly it is (Was it made without harming the environment?)

How meaningful it feels (Does it represent love, commitment, or a special memory?)

The name or reputation of the brand (Does it feel luxurious or exclusive?)

Figure 29 Price Influence on Purchase Likelihood

Q5/Q13. "Lab-grown diamonds look identical to natural diamonds but cost much less."

How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 30 Environmental Impact on Purchase Decision

Q6/Q13. Lab-grown diamonds are better for the environment because they do not require mining, which can harm the planet. How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 31 Emotional and Symbolic Value of Natural Diamonds

Q7/Q13. Natural diamonds are timeless, often called 'a diamond is forever.' When you buy one, you are choosing a symbol of lasting love and tradition. How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 32 Luxury and Exclusivity of Natural Diamonds

Q8/Q13. Natural diamonds are linked to luxury brands, highlighting their rarity and exclusiveness. How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 33 Customization and Personalization of Lab-Grown Diamonds

Q9/Q14. Lab-grown diamonds can be customized using advanced technology to fit your exact style and preferences. How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 34 Celebrity Endorsement and Prestige of Natural Diamonds

Q10/Q13. Natural diamonds, often endorsed by celebrities, are seen as symbols of elegance and exclusivity, making them more prestigious.

How likely are you to purchase:

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 35 Ethical Considerations in Diamond Production Figure 36 Influence of Limited-Time Discounts on Natural Diamonds

Q11/Q13. Lab-grown diamonds are ethically produced, avoiding the environmental and social issues caused by traditional diamond mining.

How likely are you to purchase:

Q12/Q13. Natural diamonds are being sold at a special discount for a limited time.

How likely are you to purchase?

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely	Very Likely
Lab-grown diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural diamond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Figure 37 Final Purchase Decision After Questionnaire*

Q13/Q13. After completing this questionnaire, which type of diamond would you choose to buy

Natural diamond

Lab-grown diamond

*Figure 38 Gender Identity*

Q14. What is your gender?

Male

Female

Non-binary / third gender

Prefer not to say

*Figure 39 Age Group*

Q15. What is your age?

Under 18

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

65 or older

*Figure 40 Annual Income*

Q16. What is your annual income?

Less than €20,000

€20,000 - €39,000

€40,000 - €59,000

€60,000 - €89,000

€90,000 - €119,000

€120,000 or more

*Figure 41 Country of Residence*

Q17. Where do you currently live?

Italy

Germany

Other European country (please specify)

Non-European country (please specify)

*Figure 42 End of Survey*

We thank you for your time spent taking this survey.  
Your response has been recorded.

## Appendix B – Codebook and Manipulations

**Codebook**

Table 81 SPSS Codebook for Survey Variables

Variable Name	Type	Measurement Level	Description	Coding Information
User_ID	String	Nominal	Unique User Identifier	N/A
Purchased_Diamond	Numeric	Nominal	Have you ever purchased a diamond?	{ 1 = No, 2 = Yes }
Know_Diamond_Diff	Numeric	Nominal	Do you know the difference between lab and natural diamonds?	{ 1 = Yes, 2 = No }
Preffered_Diamond	Numeric	Nominal	If you had to buy a diamond now, which are you more likely to buy?	{ 1 = Lab-Grown, 2 = Natural }
Rank_Appearance	Numeric	Ordinal	Rank of how it looks when buying a diamond	{ 1 = Most Important, 5 = Least Important }
Rank_Cost	Numeric	Ordinal	Rank of how much it costs when buying a diamond	{ 1 = Most Important, 5 = Least Important }
Rank_EcoFriendly	Numeric	Ordinal	Rank of how eco-friendly it is when buying a diamond	{ 1 = Most Important, 5 = Least Important }
Rank_Meaning	Numeric	Ordinal	Rank of how meaningful it feels when buying a diamond	{ 1 = Most Important, 5 = Least Important }
Rank_BrandReputation	Numeric	Ordinal	Rank of the brand's reputation when buying a diamond	{ 1 = Most Important, 5 = Least Important }
Price_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond based on price	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely,

				5 = Very Likely}
Price_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond based on price	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
EcoFriendly_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond based on eco-friendliness	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
EcoFriendly_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond despite eco-friendliness of lab diamonds	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
EmotionalAppeal_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond despite traditional appeal of natural	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
EmotionalAppeal_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond based on emotional and symbolic value	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Luxury_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond despite luxury branding of natural diamonds	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Luxury_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond based on luxury branding	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely,

				5 = Very Likely}
Customization_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond based on customization options	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Customization_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond despite customization in lab diamonds	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
CelebrityInfluence_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond despite celebrity endorsements of natural	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
CelebrityInfluence_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond based on celebrity endorsements	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Ethical_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond based on ethical considerations	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Ethical_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond despite ethical concerns	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Promotion_Likely_Lab	Numeric	Ordinal	Likelihood of purchasing a lab-grown diamond despite promotional offers on natural	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely,

				5 = Very Likely}
Promotion_Likely_Natural	Numeric	Ordinal	Likelihood of purchasing a natural diamond due to promotional discounts	{ 1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely}
Gender	Numeric	Nominal	What is your gender?	{ 1 = Male, 2 = Female, 3 = Other}
Age_Group	Numeric	Ordinal	What is your age group?	{ 1 = Under 18, 2 = 18-24, 3 = 25-34, 4 = 35-44, 5 = 45+}
Income_Group	Numeric	Ordinal	What is your annual income?	{ 1 = Less than 20K, 2 = 20K-40K, 3 = 40K-60K, 4 = 60K+}
Location	Numeric	Nominal	Where do you currently live?	{ 1 = Italy, 2 = Germany, 3 = Other European Countries, 4 = Non-European Countries}
Overall_Likely_Purchase_Lab	Numeric	Scale	Overall likelihood to purchase a lab-grown diamond	Scale (1-5)
Overall_Likely_Purchase_Natural	Numeric	Scale	Overall likelihood to purchase a natural diamond	Scale (1-5)
Marketing_Strategy_Overall	Numeric	Scale	Overall effectiveness of marketing strategies in influencing purchase decisions	Scale (1-5)

## Data Manipulations

### *Deleted Columns*

The following columns were removed from the dataset due to irrelevance or redundancy:

- Start Date
- End Date
- Status Response Type
- IP Address
- Progress Later
- Finished Surveys
- Recorded Date
- Duration
- Recipient Last Name (not asked)
- Recipient First Name (not asked)
- Recipient Email (not asked)
- External Data Reference (not asked)
- Location Latitude
- Location Longitude
- Distribution Channel
- User Language (same for all respondents)

### *Deleted Responses Due to Incompleteness*

A total of **34 responses** were removed from the dataset due to incompleteness. The following response IDs were excluded:

- R\_8vR6x440LBzsS5j
- R\_2cbmhJnFORqpQZQ
- R\_5CO2T8gYfAv1seD
- R\_5CO2T8gYfAv1seD
- R\_8kokv5CUvyq4phk
- R\_87PajWOj8SKRkks
- R\_2WzYKYsQ8RV3foZ

- R\_2M5IaaZbQlJ0sLf
- R\_8imTXQqYjr7G1C2
- R\_274pH3OVja6w0qc
- R\_80k6lLn6AODsDw3
- R\_8MEutj4gwwJLrJk
- R\_2sbUixUqIh0MNMmc
- R\_8kJXp3BTYtx7kHv
- R\_2EdmHsGd9IBvH7J
- R\_27QkUBQ0woKOJHz
- R\_8lmBh9NSJM1087G
- R\_8qFDL6Lhc95irRL
- R\_2pssIocE2oP19sb
- R\_8zIUx9x1jG6tnIl
- R\_8cAqXuk8zB43FM5
- R\_7G8vdt1opjEE0cz
- R\_2fuyUXK3bF30wHP
- R\_8aX6ZZCTbuOce0p
- R\_2BP0DW0y4sqKjMQ
- R\_2eJDiuFbOLjHM4o
- R\_8GZWsmKPzgHH3Lt
- R\_8TSIxIbt26bAXEP
- R\_3GBXY3Xgan5k60u
- R\_8HnIesdmUzKixht
- R\_8EhzB6vklwR1Da6
- R\_2Lo0vgJFgBui91S
- R\_2DThyxVQUnBX2FO

### *Final Sample Size*

After data cleaning and the removal of incomplete responses, the final dataset consists of 213 valid responses.