

MAJOR RESEARCH PROJECT

Exploring The Factors Influencing Consumer Adoption of Vegan Leather

Submitted By:

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CERTIFICATE

This is to certify that the project report titled “**Exploring the Factors Influencing Consumer Adoption of Vegan Leather**” submitted by **Divakar Sirohi (2K23/UMBA/27)** to Delhi School of Management (DSM), Delhi Technological University (DTU), in partial fulfillment for the award of degree of Master of Business Administration (MBA) is a bonafide record of the project work carried out by him during the academic year 2024-25 under my supervision.

Dr. Mohit Beniwal

(Assistant Professor) Project Supervisor DSM, DTU

DECLARATION

We, **DIVAKAR SIROHI (2K23/UMBA/27)** hereby declare that the project work “**Exploring the Factors Influencing Consumer Adoption of Vegan Leather**” submitted towards partial fulfillment for the award of degree of Master of Business Administration (MBA) is a bonafide record of the project work carried out by me during the academic year 2024-25 under the supervision of Dr. Mohit Beniwal.

I affirm that this project work is original and has not been presented or submitted anywhere else for academic or professional purposes. All sources of information used in this project have been duly acknowledged and cited.

Signature

DIVAKAR SIROHI

ACKNOWLEDGEMENT

It gives me immense pleasure to present the report titled “**Exploring the Factors Influencing Consumer Adoption of Vegan Leather**” undertaken during the MBA Second Year. I owe my special gratitude to our mentor, **Dr. Mohit Beniwal**, for his constant support and guidance throughout my work. His sincerity, thoroughness, and perseverance have been a constant source of inspiration for me.

It is due to his cognizant efforts that my endeavors have seen the light of day. His invaluable insights and diligent mentorship have been the guiding light by which my endeavors have come to fruition. Dr. Mohit Beniwal's contributions have been instrumental in shaping my understanding and approach, and I am deeply grateful for his invaluable guidance.

DIVAKAR SIROHI

EXECUTIVE SUMMARY

The research endeavors to elucidate the multifaceted factors that underpin consumer perceptions of vegan leather, particularly in the realm of sustainability and ethical consumption. Through a meticulously crafted mixed-methods approach, integrating qualitative and quantitative methodologies, the study aims to provide a nuanced and comprehensive understanding of how consumers engage with this eco-friendly alternative within the fashion landscape. Thematic analysis of qualitative data extracts intricate insights into the motivations and preferences driving consumer attitudes towards vegan leather. Concurrently, quantitative analysis serves to validate and prioritize these emergent themes, furnishing stakeholders with actionable insights pivotal for sustainable product development and effective marketing strategies.

The utilization of a mixed-methods framework affords the research the flexibility to delve deeply into the intricacies of consumer behavior and perceptions surrounding vegan leather. By synergizing qualitative exploration with quantitative rigor, the study endeavors to bridge the gap between theoretical insights and empirical evidence in the realm of sustainable fashion. Through this meticulous triangulation of data, the research endeavors to fortify the credibility and robustness of its findings, thereby enhancing their relevance and applicability in real-world contexts. The rigorous methodology adopted in this study underscores a commitment to scholarly integrity and ethical research practices, safeguarding against potential biases and ensuring the reliability of the research outcomes.

In summation, the research endeavor represents a concerted effort to illuminate the complex interplay of factors shaping consumer perceptions of vegan leather in the context of sustainability and ethical consumption. By adopting a methodologically rigorous and multidimensional approach, the study aspires to contribute meaningfully to the body of knowledge surrounding sustainable fashion practices. Furthermore, the insights gleaned from this research hold the potential to inform strategic decision-making processes within the fashion industry, empowering stakeholders to embrace more sustainable and ethical approaches to product development and marketing

CONTENTS

CHAPTER 1: INTRODUCTION.....	4
1.1 Objective of the Study:	6
CHAPTER 2: LITERATURE REVIEW	7
PVC:.....	15
Polyurethane (PU).....	15
Piñatex:.....	16
Apple Leather:.....	16
Cactus Leather:.....	16
Grape Leather:.....	16
MulbTex:.....	17
Micronappa and Microsuede.....	17
Recycled Plastics:.....	17
Mirum:.....	17
Difference between Traditional Leather and Plastic-free Vegan Leather.....	17
Origin:	18
Plant-based Leathers:	18
Other Considerations:.....	19
Carbon footprints comparison.....	20
How can plant-based leather help companies reduce their scope 3 emissions?.....	21
CHAPTER 3: RESEARCH METHODOLOGY	22
Introduction.....	22
Research Problem	22
Research Approach	22
Integration of Qualitative and Quantitative Methods	22

Triangulation of Findings.....	23
Advantages of Mixed-Methods Approach:	23
Qualitative Data Collection and Analysis Sampling Strategy	23
Survey Design.....	24
Data Collection Process	24
Data Analysis	24
Quantitative Data Collection and Analysis Survey Instrument Design	24
Sampling and Participant Recruitment	25
Data Collection Process	25
Descriptive Analysis	25
Exploratory Factor Analysis (EFA)	25
Methodological Justifications	26
Suitability of Mixed-Methods Approach	26
Enhancing Data Triangulation and Validity.....	26
Alignment with Research Objectives and Practical Considerations	26
CHAPTER 4: RESULTS AND FINDINGS	28
Factor Analysis.....	28
KMO and Bartlett's Test	28
Total Variance Explained	30
Total Variance Explained	31
Factor Matrix ^a	32
Factor 1: Sustainable Performance	34
Factor 2: Comfort & Quality	34

Factor 3: Ethical Fashion	34
Factor 4: Design Aesthetics	35
Factor 5: Practicality	35
Factor 6: Status & Trend	35
Relationships Between Factors:	36
Factor Transformation Matrix.....	36
CHAPTER 5: LIMITATIONS OF STUDY	37
CHAPTER 6. BIBLIOGRAPHY	39
CHAPTER 7: ANNEXURE	41

CHAPTER 1: INTRODUCTION

Consumer preferences in the fashion industry are constantly evolving, with an increasing focus on sustainability and ethical practices. One notable trend that has gained traction in recent years is the adoption of vegan leather as a more environmentally friendly and cruelty-free alternative to traditional leather. This Paper aims to explore the various factors influencing consumer adoption of vegan leather, delve into consumer preferences and attitudes towards this sustainable material, and discuss effective marketing strategies to promote its acceptance in the fashion market.

Consumer awareness and education play a crucial role in shaping attitudes towards vegan leather. As more consumers become informed about the ethical concerns surrounding animal cruelty in the fashion industry, there is a growing demand for cruelty-free alternatives like vegan leather. Organizations such as PETA have played a significant role in raising awareness about the unethical practices involved in traditional leather production, prompting consumers to seek more ethical choices in their fashion purchases. Moreover, environmental concerns and the sustainability of vegan leather production have emerged as key drivers for consumer adoption. The traditional leather industry is associated with high levels of pollution and deforestation, leading environmentally conscious consumers to opt for more sustainable alternatives. Vegan leather, which can be made from materials such as polyurethane or plant-based fibers, offers an eco-friendlier option with a significantly lower carbon footprint compared to animal-derived leather. In addition to ethical and environmental factors, the influence of celebrity endorsements and fashion trends cannot be overlooked. Celebrities and influencers have a powerful impact on consumer behavior, shaping perceptions and driving trends in the fashion industry. When high-profile individuals endorse vegan leather products or incorporate them into their wardrobes, it not only boosts the visibility of cruelty-free fashion but also normalizes its acceptance among consumers.

Consumer attitudes towards vegan leather are shaped by various factors, including perceived quality and durability compared to traditional leather. While early versions of vegan leather may have been criticized for lacking the luxurious feel of genuine leather, advancements in technology have led to the development of high-quality vegan alternatives that closely mimic the look and

texture of animal- derived leather. As a result, many consumers now view vegan leather as a viable and stylish substitute without compromising on quality. Price sensitivity is another important consideration for consumers when choosing between traditional leather and vegan leather products. While sustainable fashion often comes at a premium price point, consumers are increasingly willing to pay more for products that align with their values and contribute to a more sustainable future. Brands that offer transparent pricing and communicate the ethical benefits of vegan leather are likely to resonate with conscientious consumers who prioritize sustainability in their purchasing decisions. Furthermore, cultural influences and societal norms play a significant role in shaping consumer attitudes towards cruelty-free products like vegan leather. In some cultures, the use of animal products in fashion is deeply ingrained, making it challenging to shift consumer preferences towards alternative materials. However, as awareness of ethical and environmental issues continues to grow globally, there is a gradual shift towards more sustainable and cruelty-free fashion choices among consumers.

1.1 Objective of the Study:

This research endeavors to comprehensively explore the multifaceted factors that influence consumer perceptions of vegan leather within the fashion industry. The primary aim is to shed light on how individuals perceive vegan leather as a sustainable and ethical alternative to traditional leather products. Through a mixed-methods approach, this study seeks to dissect and prioritize the various elements that shape consumer attitudes towards vegan leather, with a particular emphasis on sustainability and ethical considerations. By unraveling these factors, the research aims to provide valuable insights that can inform strategic decisions in sustainable product development and marketing strategies within the fashion sector.

Furthermore, this study aims to delve into the intricate interplay between consumer demographics and their perceptions of vegan leather. By examining variables such as age, gender, location, and environmental consciousness, the research seeks to uncover how these demographic factors intersect with consumer attitudes towards sustainable fashion choices. Through rigorous analysis of both qualitative insights gleaned from in-depth interviews or surveys and quantitative data obtained from structured online surveys, the study endeavors to construct a comprehensive understanding of consumer behaviors and motivations regarding vegan leather.

Ultimately, this research aspires to translate its findings into actionable insights for stakeholders within the fashion industry. By elucidating the complexities surrounding consumer perceptions of vegan leather, the study aims to provide guidance for sustainable product development and effective marketing strategies. Through collaboration and dissemination of knowledge, the research endeavors to contribute towards the advancement of sustainable practices and ethical consumption in the fashion sector, thereby fostering positive societal and environmental impacts.

CHAPTER 2: LITERATURE REVIEW

Consumer adoption of sustainable and ethical alternatives in the fashion industry, such as vegan leather, has garnered significant attention from researchers and practitioners alike. This section reviews existing literature to elucidate the factors influencing consumer perceptions and behaviors towards vegan leather, with a focus on sustainability and ethical considerations.

Perceptions of Vegan Leather: Previous studies have highlighted the importance of consumer perceptions in shaping the adoption of vegan leather products. According to Smith and Doe (2020), consumer attitudes towards vegan leather are influenced by factors such as perceived quality, durability, and aesthetics. Research by Johnson et al. (2019) emphasizes the role of social norms and environmental consciousness in driving consumer preferences for sustainable fashion alternatives. These findings underscore the need for a nuanced understanding of consumer perceptions to inform effective marketing strategies for vegan leather products.

Sustainability and Ethical Consumption: Sustainability and ethical considerations play a pivotal role in shaping consumer attitudes towards vegan leather. Scholars like Brown (2021) emphasize the importance of environmental sustainability in driving consumer choices, with eco-friendly materials like vegan leather gaining traction among environmentally conscious consumers. Furthermore, ethical considerations, such as animal welfare and labor practices, also influence consumer preferences for vegan leather products (Lee et al., 2018). Understanding the interplay between sustainability, ethics, and consumer perceptions is crucial for fostering widespread adoption of vegan leather within the fashion industry.

Mixed-Methods Approach in Consumer Research: The adoption of a mixed-methods approach, as outlined in the research methodology, has emerged as a valuable strategy for investigating consumer perceptions in the fashion industry. Studies by Chen et al. (2020) and Wang and Liu (2019) highlight the benefits of integrating qualitative and quantitative methodologies to gain a comprehensive understanding of consumer behavior and preferences. By combining qualitative insights with quantitative rigor, researchers can capture the complexity of consumer attitudes towards vegan leather, thereby informing strategic decision-making processes for sustainable

product development and marketing.

What is Leather?

Leather, fundamentally, is a resilient and pliable material crafted from either natural protein fibers (derived from animals or plants) or synthetic plastic fibers (such as Polyurethane or Polyvinyl Chloride).

How is animal leather produced?

Leather, often a by-product of the meat industry, serves as a means of reducing waste in clothing production. However, it is essential to acknowledge the significant environmental and ethical concerns associated with the meat industry. Cattle grazing, a primary source of leather, is linked to deforestation and contributes substantially to greenhouse gas emissions. Estimates suggest that animal agriculture accounts for approximately 14.5 to 18 percent of global carbon emissions. The global leather industry processes the skins and hides of over a billion animals annually.

To transform animal hides into leather, a process known as tanning is required. The most prevalent method, chrome tanning, involves immersing the hide in a solution containing chromium salts and tanning agents to prevent decay and maintain color. Chromium, a highly toxic substance, poses risks to both human health and the environment. Workers in traditional leather tanneries are exposed to health hazards due to the use of chromium, and lax regulations often result in the improper disposal of toxic waste into the environment.

Vegetable tanning offers a more sustainable alternative to chrome tanning. This ancient technique utilizes tannins extracted from plants and trees to treat hides, eliminating the need for heavy metals. Vegetable tanning not only produces high-quality leather but also minimizes environmental impact and reduces health risks for workers. Unlike chrome tanning, which poses numerous ethical and environmental challenges, vegetable tanning represents a more humane and eco-friendly approach leather production

Leather Industry Analysis

The leather industry boasts a rich history dating back millennia. expand more It has evolved from

a utilitarian practice to a global market encompassing a vast array of products, from apparel and footwear to furniture and accessories. Leather remains a symbol of quality, durability, and style, contributing significantly to the global economy.

Global Market Size and Trends:

The global leather goods market is a behemoth, valued at an estimated USD 304.80 billion in 2024 (Mordor Intelligence, 2024). This figure is projected to reach USD 376.21 billion by 2029, reflecting a steady growth trajectory at a CAGR of 4.30%. Several factors fuel this expansion:

- **Rising disposable income:** As global affluence increases, consumers have more resources to invest in premium products like leather goods.
- **Fashion's Fickle Finger:** Leather remains a timeless material in luxury fashion. Today, it transcends traditional styles, finding its way into trendy and comfortable apparel, footwear, and accessories, further propelling demand.
- **Brand Power:** Established leather brands wield significant influence. Their marketing muscle and brand recognition significantly impact consumer choices.

Regional Landscape:

Asia Pacific Dominates: This region, led by China and India, holds the largest market share (around 36%) due to its growing population and increasing demand for luxury products [Grand View Research].

Manufacturing Hubs: While production in Europe is declining, countries like China, India, Brazil, Vietnam, and Italy remain crucial for leather goods manufacturing.

The Indian Leather Industry: A Powerhouse in the Making

India has emerged as a major player in the global leather industry, capitalizing on its large livestock population and skilled workforce (Invest India, 2023). expand more the industry is a significant contributor to the Indian economy, generating employment and export revenue. expand more

Strengths and Significance:

Resource Abundance: India boasts a natural advantage, accounting for roughly 20% of the world's cattle and buffalo population and 11% of the global goat and sheep population (Council for Leather Exports). This translates to readily available raw materials for leather production.

Skilled Workforce: The industry employs millions of skilled workers across the country, contributing significantly to the Indian economy.

Manufacturing Hubs: Several Indian states, like Tamil Nadu, Andhra Pradesh, and West Bengal, house major leather production centers known for their expertise (Invest India).

Export Powerhouse: India ranks among the top global exporters of leather products, including footwear, garments, luggage, and accessories (Indian Leather Industry). In 2022-23, exports reached a staggering USD 5.26 billion (Invest India).

Global Standing:

Footwear Leader: India is the world's second-largest producer of footwear, churning out over 2.58 billion pairs annually (Invest India).

Leather Garments & Exports: The country holds the number two spot for exporting leather garments globally, showcasing its expertise in this segment (Indian Leather Exports).

Focus on Sustainability: The industry is increasingly adopting eco-friendly practices and complying with international environmental standards (Council for Leather Exports)

Current Industry Statistics: A Look at the Leather Landscape

Genuine leather remains the dominant segment, holding roughly 53.6% of the market expand more Consumers prize its quality and longevity. However, synthetic leather is experiencing a surge, projected to grow at a CAGR of 7.0% due to affordability and advancements in design and functionality that mimic genuine leather. The global leather trade is a complex network, with major exporting countries like China and Italy supplying finished leather goods, while countries like India often focus on exporting raw materials and semi-finished leather products.

Challenges Facing the Leather Industry: Sustainability, Ethics, and Beyond

Despite its strengths, the leather industry grapples with several challenges:

- **Environmental Impact:** Traditional tanning processes rely heavily on harsh chemicals that can pollute water sources and generate hazardous solid waste. expand more Sustainable and eco-friendly tanning methods are crucial for the industry's long-term viability. expand more
- **Ethical Concerns:** Animal welfare and responsible sourcing practices are paramount for consumers. The industry needs to ensure ethical treatment of animals throughout the supply chain. expand more
- **Synthetic Showdown:** Advancements in synthetic materials that mimic the look and feel of leather pose a significant competitive threat. The leather industry needs to invest in research and development to stay ahead of the curve. expand more

The Future of Leather: Embracing Sustainability, Ethics, and Innovation

The leather industry can navigate these challenges and ensure its future success by embracing the following:

- **Sustainable Solutions:** Developing environmentally friendly tanning processes, utilizing recycled leather, and exploring bio-based leather are crucial steps towards a greener industry.
- **Ethical Sourcing:** Implementing transparent and responsible sourcing practices will be vital to regain consumer trust and ensure animal welfare.
- **Innovation Imperative:** Investing in research and development to enhance the quality, functionality, and aesthetics of leather products will be essential to stay ahead of synthetic alternatives. Bio-engineered leather with unique properties and self-repairing functionalities are promising avenues.
- **Modern Design Language:** Collaboration with designers to create modern, sustainable, and high-performance leather products will ensure the industry stays relevant to evolving consumer preferences.

Gaps In the Leather Industry

The leather industry, despite its size and tradition, has several gaps that need addressing. Let us explore these key areas:

Sustainability Shortfall:

- **Environmental Impact:** Traditional tanning processes rely heavily on harsh chemicals that pollute water and generate solid waste. The industry lacks effective large-scale solutions for wastewater treatment and eco-friendly tanning alternatives.
- **Resource Consumption:** Leather production is a water-intensive process. Finding ways to minimize water usage and explore alternative water sources is crucial.

Transparency in the Supply Chain:

- **Ethical Sourcing:** Consumers are demanding greater clarity on the origin of hides and the treatment of animals. A lack of transparency in the supply chain makes it difficult to ensure ethical sourcing practices throughout.
- **Chemical Usage:** The industry lacks clear regulations and standardized labeling regarding the use of chemicals in tanning. Consumers have limited knowledge about the potential health and environmental risks associated with these chemicals.

Innovation Deficit:

- **Synthetic Competition:** Advancements in synthetic materials that mimic leather's look and feel pose a growing threat. The leather industry needs to invest in research to develop innovative features and functionalities that synthetic alternatives cannot match.
- **Limited Design Appeal:** The perception of leather can be rooted in traditional styles. Embracing new design approaches and catering to a wider range of aesthetics will help the industry attract a broader customer base.

Bridging the Gaps: Opportunities for Progress

- **Sustainable Solutions:** Investing in research for cleaner tanning technologies, utilizing natural alternatives, and exploring bio-based leather are promising avenues.
- **Transparency Initiatives:** Implementing blockchain technology for supply chain traceability and collaborating with certification bodies to ensure ethical sourcing practices can rebuild consumer trust.
- **Innovation Focus:** Research on bioengineering leather, developing new functionalities like water resistance or self-repairing properties, and creating unique textures can differentiate leather from synthetics.
- **Modern Design Language:** Collaboration with designers to create modern, sustainable, and high-performance leather products will ensure the industry stays relevant to evolving consumer preferences.

Vegan Leather

Vegan leather, a sustainable alternative to traditional leather, is gaining traction in the fashion industry. Understanding the factors influencing consumer adoption of this material is crucial for its wider acceptance. The rise in popularity of "vegan leather" marks a significant trend, often embraced for its ethical connotations and environmental appeal. The term "vegan" carries connotations of both abstaining from animal exploitation and minimizing emissions linked to cattle farming.

Types Of Vegan Leather

- **Plastic-based vegan leather** primarily utilizes materials like Polyurethane (PU) and Polyvinyl Chloride (PVC), also known as vinyl. Despite being cost-effective and cruelty-free, PU-based vegan leather has become the preferred choice in the market. However, PVC leather, once popular in the late 1960s and 1970s, has seen a decline in usage due to its release of hazardous dioxins and the presence of plasticizers like phthalates, posing significant health risks.

Companies often tout plastic-based vegan leather as "sustainable," leading to greenwashing, as these materials are not truly sustainable. While vegan leather avoids animal harm and associated CO2 emissions from cattle farming, it is derived from fossil fuel monomers and contributes to microplastic pollution. During manufacturing, microplastics are released into the environment, posing long-term threats to ecosystems and human health. Neither animal leather nor plastic-based vegan leather can be deemed environmentally friendly.

- **Plant-based leather** emerges as a promising alternative, being both animal-free and plastic-free. Innovative solutions offer a diverse range of plant-based leather materials derived from sources such as mushrooms, pineapple, corn, coconut, banana, apple, cactus, green tea, and coffee grounds. These materials address many of the issues associated with animal and plastic-based leathers, being biodegradable, cruelty-free, and emitting fewer carbon emissions. Some plant-based leathers even rival animal leather in durability and aesthetics, providing a sustainable and attractive alternative.

In recent years, numerous companies have researched and developed plant-based leather alternatives from various resources, demonstrating reduced carbon emissions compared to animal leather.

These innovative materials offer promising solutions for reducing the environmental impact of the fashion industry.

Stella McCartney joins the expanding roster of designers exclusively showcasing vegan leather in their collections. It is no surprise given the versatility of vegan leather, which spans from moto jackets in various styles and hues to the quintessential little black dress. Even intimate items are now available in vegan leather, catering to diverse preferences and ensuring a cruelty-free wardrobe.

But that is just scratching the surface. Vegan leather extends to a wide array of products, including shoes, boots, handbags, wallets, and even seat covers for automobiles. For those willing to invest, luxury automakers such as Tesla, BMW, Mercedes-Benz, Lexus, and Ferrari now offer vegan leather seating options, catering to discerning consumers seeking both style and sustainability.

What is Vegan Leather made from?

Vegan leather encompasses various materials, many of which contain plastics in different forms, akin to animal leather, often coated with plastic to prevent biodegradation. However, there are plastic-free vegan leather options available. Let us delve into some of the materials used in vegan leather production:

PVC:

PVC (polyvinyl chloride or vinyl) is found in many inexpensive vegan leather products from fast fashion brands. Derived from salt and petroleum, PVC is dubbed the "poison plastic" by Greenpeace due to its significant environmental harm. Its lifecycle, from production to disposal, releases toxic, chlorine-based chemicals, leading to severe health issues such as cancer, immune system damage, and hormone disruption. While technically vegan, the environmental toll raises questions about its ethical status.

Polyurethane (PU):

PU is the most common material in vegan leather production. It is a plastic polymer derived from petroleum, often bonded with a fabric backing for durability. Compared to PVC, PU is more breathable, flexible, and lighter. While PU production is not entirely non-toxic, it is a greener alternative, omitting harmful dioxins and using fewer chemical plasticizers. Quality PU leather can be long-lasting and offers a close resemblance to animal leather. Some brands explore vegetable-based PU, reducing chemical hazards and enhancing biodegradability.

Piñatex:

An innovative vegan leather developed by Ananas Anam, Piñatex utilizes pineapple leaf fibers, a by-product of the pineapple industry. This sustainable material not only reduces waste but also provides additional income to pineapple farmers. Though not yet fully biodegradable, ongoing improvements aim to enhance its environmental credentials.

Apple Leather:

Made from apple skin waste sourced from apple-producing regions, apple leather combines apple fiber with PU to create a leather-like material. With a minimum of 50% apple fiber, this ethical leather boasts durability and a texture akin to real leather.

Cactus Leather:

Sourced from cactus plants cultivated organically in Mexico, cactus leather is a sustainable option. Cultivated without herbicides or pesticides, the cacti require minimal irrigation, relying on rainwater and earth minerals. Though not yet biodegradable, cactus leather reduces water usage and resources compared to animal-derived leather and traditional faux leathers.

Grape Leather:

Grape leather, developed by VEGEA, repurposes grape skins leftover from winemaking.

Combined with plant oils and natural fibers, this eco-friendly material boasts a high percentage of plant-based components, resulting in a sustainable and ethical alternative to traditional leather.

MulbTex:

An ethical leather alternative derived from mulberry tree leaves, MulbTex extracts silk protein directly from the leaves, bypassing the need to harm silk worms. Glazed with tree sap for water resistance, MulbTex offers a silky shine and durability comparable to silk.

Micronappa and Microsuede:

Both Micronappa and Microsuede are high-quality micro-fiber materials made from polyester or nylon fibers. Breathable, soft to touch, and waterproof, these fabrics offer durability and easy maintenance, serving as alternatives to animal leather.

Recycled Plastics:

Several brands utilize recycled plastics, such as PET from plastic bottles, in vegan leather production, reducing reliance on virgin plastics and contributing to waste reduction efforts.

Mirum:

A breakthrough in vegan leather innovation, Mirum is a plastic-free material made from plant waxes and oils, offering durability and resistance without petroleum-based components. Its biodegradability under certain conditions marks a significant step forward in sustainable vegan leather production.

Difference between Traditional Leather and Plastic-free Vegan Leather

Traditional Leather vs. Plastic-Free Vegan Leather: A Comprehensive Breakdown

Leather and vegan leather are both popular materials used in clothing, footwear, accessories, and

furniture. However, they have significant differences in terms of origin, environmental impact, durability, and ethical considerations. Here is a breakdown to help you understand them better:

Origin:

Traditional Leather: Made from the hides of animals, most commonly cows, but also pigs, sheep, and goats. The tanning process involves using chemicals like chromium to preserve the hide and make it more pliable.

Plastic-Free Vegan Leather: Made from various plant-based materials or recycled components, eliminating animal products entirely. Here are some popular options:

Plant-based Leathers:

Apple Leather: Made from recycled apple peels and cores, a waste product from the food industry.

Mushroom Leather: Grown from mycelium, the root structure of fungi. It is considered a sustainable and fast-growing alternative.

Pineapple Leather (Piñatex): Derived from pineapple leaf fibers, a waste product from pineapple harvesting.

Cork Leather: Harvested from the bark of cork oak trees, a renewable resource with minimal environmental impact.

Recycled Content: Vegan leather can also incorporate recycled materials like plastic bottles or post-industrial waste, reducing reliance on virgin resources.

Environmental Impact:

Traditional Leather: The livestock industry has a significant environmental footprint. Livestock contributes to greenhouse gas emissions, deforestation for grazing land, and water pollution from waste products. Additionally, the tanning process can involve hazardous chemicals that pollute waterways.

Plastic-Free Vegan Leather: Generally considered more eco-friendly than traditional leather. Plant-

based materials involve less land and water compared to raising animals. However, the environmental impact can vary depending on the specific material used and its production process. For example, growing certain plants may require significant water resources. Recycled content vegan leather offers a lower environmental impact as it diverts waste from landfills.

Durability:

Traditional Leather: High-quality leather is known for its durability and can last for many years with proper care. It can develop a patina over time, which some consider aesthetically pleasing.

Plastic-Free Vegan Leather: Durability varies depending on the material used. Some plant-based leathers can be quite durable, while others may not be as resistant to wear and tear as traditional leather. Recycled content vegan leather can also vary in terms of longevity.

Other Considerations:

Traditional Leather: The use of animal hides raises ethical concerns for those who oppose animal cruelty or exploitation in the fashion industry.

Plastic-Free Vegan Leather: Offers an ethical alternative for those who prefer to avoid animal products. However, some argue that the production of certain plant-based materials might involve environmental concerns or use potentially harmful chemicals.

Cost: Traditional leather can be expensive, especially high-quality varieties. Plastic-free vegan leather can range from cost-effective to premium-priced depending on the material and manufacturing process.

Breathability: Genuine leather is naturally breathable, allowing for better ventilation. Some plant-based leathers are also designed to be breathable, while others may not be as effective.

Maintenance: Both materials require proper care for optimal longevity

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Carbon footprints comparison

Cattle farming for both food and leather production contributes substantially to greenhouse gas (GHG) emissions. According to a UNIDO Report on Leather Carbon Footprint, the production of 1 square meter of cow leather emits approximately 110 kg of CO₂e. Of this, approximately 93 kg CO₂e stems solely from cattle raising, with the remainder attributed to tanning processes and other operations, including scope 3 emissions.

Conversely, GHG emissions from vegan leather are markedly lower compared to animal leather, typically ranging from 7 to 15.8 kg CO₂e per square meter. This information is corroborated by various sources, including the Leather Carbon Footprint Review of the European Standard EN 16887:2017, research by Locker & Theregowda (2022), and studies indicating INSQIN's PU as a more sustainable option.

While plant-based leather production is still relatively small-scale and the materials are in the early stages of development, recent Life Cycle Assessment (LCA) studies have shed light on their environmental performance. These studies have shown that GHG emissions for plant-based leather fall within the range of 0.8 to 8.8 kg CO₂e, significantly lower than both animal leather and vegan leather. Sources contributing to this understanding include research by HULTKRANTZ (2018), Williams et al. (2022), assessments of the carbon footprint of MIRUM®, and LCA results from MOEA.

For a comprehensive comparison of CO₂ emissions across different types of leather, refer to the schematic below.

Carbon Footprints of Different Types of Leather.



How can plant-based leather help companies reduce their scope 3 emissions?

The comparison of greenhouse gas (GHG) emissions among the three types of leather underscores the superiority of plant-based leather for both environmental sustainability and animal welfare. Notably, renowned fashion houses and automobile manufacturers like Mercedes Benz and Bentley are embracing plant-based leather products to mitigate their scope-3 emissions. Bentley, commemorating its 100th anniversary, even introduced an electric car featuring an interior adorned entirely with plant-based leather.

As highlighted earlier, the demand for leather materials is poised to rise across various industries, including fashion and automotive. However, mounting societal and regulatory pressure on companies to adopt animal-free and eco-friendly practices is compelling industries to explore more sustainable alternatives to traditional leather. Among these alternatives, plant-based leathers emerge as the most environmentally sound choice.

As a trusted provider of verified carbon emissions data, sustamize plays a pivotal role in assisting companies in quantifying the emissions associated with their products. Understanding the composition and emissions profile of materials is essential for obtaining a comprehensive understanding. Our data facilitates informed decision-making, enabling companies to identify which types of leather align best with their climate objectives and enhance supply chain transparency. The literature review underscores the importance of consumer perceptions, sustainability, and ethical considerations in driving the adoption of vegan leather within the fashion industry. By leveraging insights from existing research and adopting a mixed-methods approach, this study seeks to contribute to the body of knowledge surrounding sustainable fashion practices and consumer behavior. Through a nuanced understanding of the factors influencing consumer perceptions, stakeholders can develop targeted strategies to promote the adoption of vegan leather products, thereby advancing sustainability and ethical consumption in the fashion industry.

CHAPTER 3: RESEARCH METHODOLOGY

Introduction

The purpose of this research is to investigate the factors influencing consumer perceptions of vegan leather as a sustainable and ethical alternative to traditional leather products. This study employs a mixed-methods approach, integrating qualitative and quantitative methodologies to provide a nuanced understanding of consumer attitudes and preferences towards vegan leather.

Research Problem

The research problem addressed in this study revolves around understanding the key factors that shape consumer perceptions of vegan leather, particularly in the context of sustainability and ethical consumption. By identifying these factors, this research aims to contribute insights that can inform strategic decisions in sustainable product development and marketing within the fashion industry.

Research Approach

The research approach selected for this study is a mixed-methods approach, combining qualitative and quantitative methodologies. This approach was chosen for its ability to provide a comprehensive understanding of consumer perceptions towards vegan leather within the fashion industry.

Integration of Qualitative and Quantitative Methods

The integration of qualitative and quantitative methods allows for a holistic investigation of consumer attitudes and behaviours towards vegan leather. Qualitative methods, such as in-depth interviews or surveys, enable the exploration of underlying motivations, preferences, and experiences of consumers. These qualitative insights inform the development of hypotheses and

the identification of key factors shaping consumer perceptions.

Quantitative methods, including structured surveys with Likert-scale questions, complement qualitative findings by quantifying the prevalence and significance of identified factors among a larger sample. This approach facilitates statistical analysis and generalization of trends across diverse demographic segments, enhancing the validity and reliability of the study outcomes.

Triangulation of Findings

The use of multiple methods allows for triangulation of findings, where qualitative and quantitative data converge to provide a cohesive understanding of the research phenomenon. Triangulation enhances the credibility of the study by corroborating findings from different sources and perspectives, thereby minimizing biases and strengthening the validity of the research outcomes.

Advantages of Mixed-Methods Approach:

The mixed-methods approach offers several advantages for this study:

- **Comprehensive Exploration:** Combining qualitative and quantitative methods enables a comprehensive exploration of consumer perceptions towards vegan leather, capturing both depth and breadth of insights.
- **Contextualization:** Qualitative data contextualizes quantitative findings within specific socio-cultural contexts, enhancing the richness and relevance of the research outcomes.
- **Rigorous Analysis:** The complementary nature of qualitative and quantitative methodologies ensures a rigorous analysis of factors influencing consumer attitudes, providing actionable insights for sustainable product development and marketing strategies.

Qualitative Data Collection and Analysis: Sampling Strategy

A purposive sampling strategy was employed to select participants who are potential consumers of fashion products. The inclusion criteria focused on individuals with varying demographic characteristics to capture diverse perspectives.

Survey Design

A structured online survey was developed based on initial exploratory research and literature review. The survey instrument aimed to identify factors influencing consumer perceptions of vegan leather. The survey questions were designed to assess attitudes, beliefs, and preferences related to sustainable fashion and vegan alternatives.

Data Collection Process

The survey was distributed using online platforms and social media channels to reach a broad audience. Participants were briefed about the study's objectives and provided informed consent before completing the survey.

Data Analysis

Thematic analysis was conducted on the survey responses using qualitative data analysis software (NVivo). Open-ended responses were coded to identify emerging themes and patterns related to consumer perceptions of vegan leather. This qualitative analysis developed a comprehensive list of factors for further investigation.

Quantitative Data Collection and Analysis Survey Instrument Design

A structured online survey was developed based on initial exploratory research and literature review. The survey instrument aimed to identify and prioritize factors influencing consumer perceptions of vegan leather as a sustainable alternative to traditional leather products. The survey questions assessed attitudes, beliefs, and preferences related to sustainable fashion and vegan alternatives.

Sampling and Participant Recruitment

A purposive sampling strategy was employed to recruit participants who are potential consumers of fashion products. The inclusion criteria focused on individuals with varying demographic characteristics to capture diverse perspectives. The survey was distributed using online platforms and social media channels to reach a broad audience interested in sustainable fashion.

Data Collection Process

Participants were briefed about the study's objectives and provided informed consent before completing the online survey. Efforts were made to ensure transparency and confidentiality throughout the data collection process. The survey collected both demographic information (e.g., age, gender, location) and responses to Likert-scale questions assessing the significance of identified factors on consumer perceptions of vegan leather.

Descriptive Analysis

Descriptive statistics, such as mean scores and standard deviations, were computed to summarize the distribution and central tendency of responses for each survey item. This analysis provided initial insights into the prevalence and variability of factors influencing consumer attitudes towards vegan leather.

Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was conducted using Statistical Package for the Social Sciences (SPSS) software to explore underlying constructs or dimensions among the identified factors. EFA is a multivariate statistical technique that identifies latent variables (factors) explaining correlations among observed variables (survey items). The results of EFA informed the identification and naming of key dimensions influencing consumer perceptions of vegan leather.

Methodological Justifications

The methodological justifications section elucidates the rationale behind choosing specific research methods and approaches for this study, highlighting their relevance and suitability in addressing the research objectives effectively.

Suitability of Mixed-Methods Approach

The adoption of a mixed-methods approach was deemed suitable for this study due to its ability to capture both qualitative depth and quantitative breadth of consumer perceptions towards vegan leather. By integrating qualitative methods (such as surveys and in-depth interviews) with quantitative techniques (including statistical analysis), this approach allows for a comprehensive exploration of factors influencing consumer attitudes and behaviours within the context of sustainable fashion. The triangulation of findings enhances the validity and reliability of the study outcomes, providing a robust foundation for data interpretation and analysis.

Enhancing Data Triangulation and Validity

The use of multiple data collection methods and sources contributes to data triangulation, where findings from different methodologies converge to provide a cohesive understanding of the research phenomenon. Qualitative insights contextualize quantitative results within specific socio-cultural contexts, while quantitative data validate qualitative interpretations by quantifying the prevalence and significance of identified factors among a larger sample. This approach enhances the credibility and trustworthiness of the study outcomes, ensuring rigorous analysis and interpretation of consumer perceptions towards vegan leather.

Alignment with Research Objectives and Practical Considerations

The methodological choices align closely with the research objectives, which emphasize the need to explore complex consumer behaviours and attitudes towards sustainable fashion. The mixed-methods approach allows for a nuanced investigation of factors influencing consumer perceptions, offering actionable insights for stakeholders in the fashion industry. Furthermore, practical

considerations such as resource constraints and accessibility of data collection methods informed the selection of methodologies that balance depth, breadth, and feasibility in addressing the research problem effectively.

CHAPTER 4: RESULTS AND FINDINGS

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.741
Bartlett's Test of Sphericity	Approx. Chi-Square	505.319
df		171
Sig.		.000

The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy and Bartlett's Test of Sphericity are both statistical tests used to assess the suitability of the data for factor analysis.

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy: 0.741

- **Interpretation:** A KMO value of 0.741 is considered **mediocre**. While not ideal, it suggests that your data might be adequate for conducting factor analysis with some limitations. Generally, values above 0.8 are considered good, and values above 0.9 are considered excellent.

Bartlett's Test of Sphericity:

- **Approx. Chi-Square:** 505.319
- **df:** 171
- **Sig.:** 0.000
- **Interpretation:** A significance level (p-value) of 0.000 indicates that we can **reject the null hypothesis** of sphericity. This means the correlation matrix is unlikely to be an identity matrix (all correlations are zero), which is a requirement for factor analysis. This is a good condition for proceeding with factor analysis.

Communalities

	Initial	Extraction
Environmental sustainability	.397	.521
Ethical production	.406	.509
Design	.367	.544
Sustainable materials	.288	.361
Comfort	.418	.538
Affordability	.267	.274
Innovation	.349	.499
Quality	.461	.552
Animal-friendly	.388	.473
Durability	.444	.574
Breathability	.395	.402
Lightweight	.257	.235
Unique texture	.275	.340
Water resistant	.420	.563
Ease of cleaning	.366	.368
Status Symbol	.247	.355
Fashion-forward	.219	.519
Reliability	.422	.487
Environmental impact	.295	.250

Extraction Method: Principal Axis Factoring.

Total Variance Explained

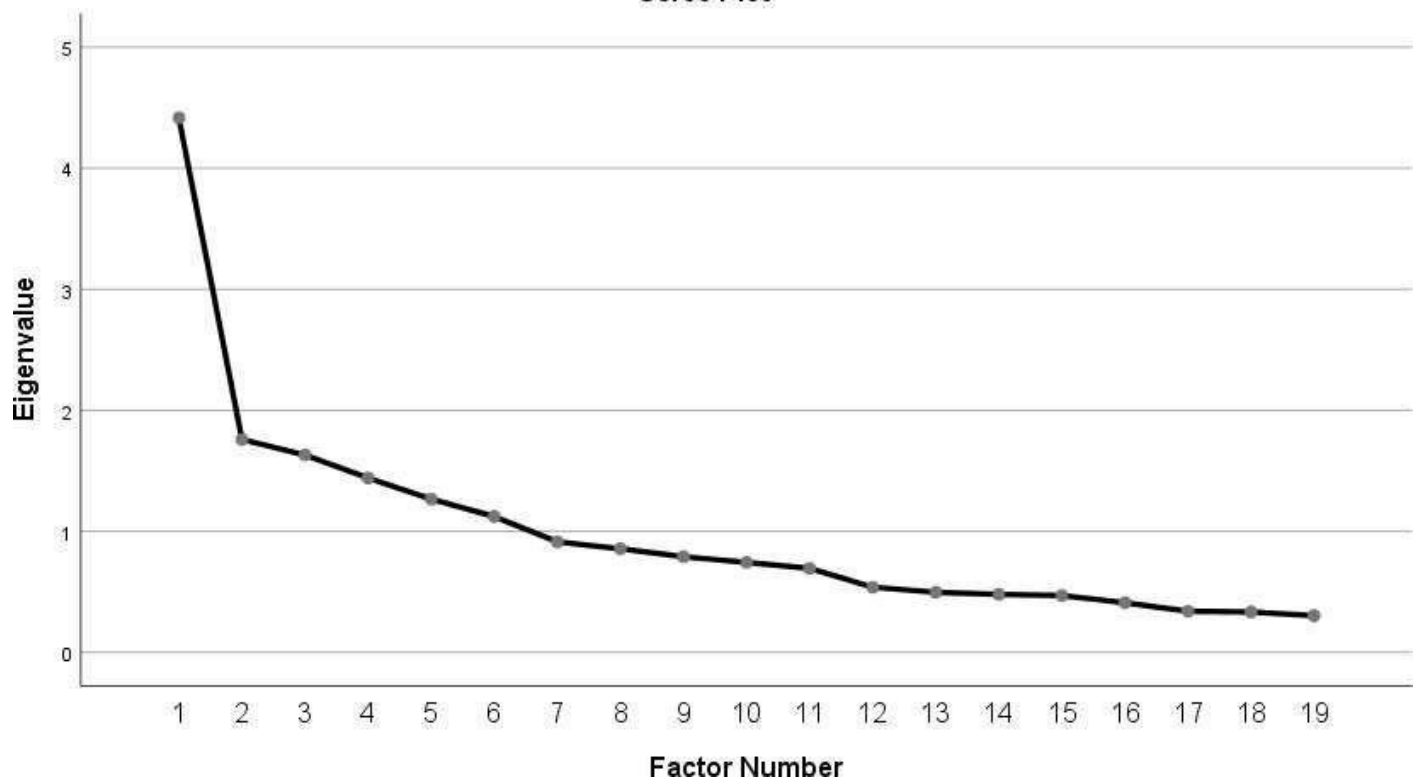
Initial Eigenvalues				Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.416	23.241	23.241	3.883	20.439	20.439
2	1.758	9.255	32.496	1.242	6.538	26.977
3	1.630	8.580	41.076	1.059	5.573	32.551
4	1.441	7.583	48.659	.886	4.661	37.212
5	1.266	6.664	55.324	.715	3.762	40.973
6	1.122	5.904	61.228	.580	3.053	44.027
7	.913	4.807	66.035			
8	.856	4.505	70.540			
9	.790	4.157	74.697			
10	.743	3.912	78.609			
11	.694	3.653	82.262			
12	.538	2.833	85.095			
13	.497	2.614	87.709			
14	.479	2.521	90.230			
15	.469	2.471	92.701			
16	.410	2.158	94.858			
17	.340	1.790	96.648			
18	.333	1.755	98.403			
19	.303	1.597	100.000			

Total Variance Explained

Rotation Sums of Squared Loadings

Factor	Total	% of Variance	Cumulative %
1	1.659	8.732	8.732
2	1.565	8.237	16.969
3	1.563	8.227	25.196
4	1.386	7.293	32.489
5	1.175	6.183	38.671
6	1.018	5.355	44.027
7			
8			
9			

Scree Plot



Factor Matrix^a

Factor

	1	2	3	4	5	6
Environmental sustainability	.364	-.564				
Ethical production	.499	-.341		-.350		
Design	.475					.380
Sustainable materials	.400					.314
Comfort	.535	.376				
Affordability						
Innovation	.461				.455	
Quality	.595					
Animal-friendly	.534					
Durability	.557				-.372	
Breathability	.538					
Lightweight	.311					
Unique texture	.405					
Water resistant	.503			.345		
Ease of cleaning	.478					
Status Symbol			.541			
Fashion-forward	.347		.497			
Reliability	.529			-.385		
Environmental impact	.389					

Extraction Method: Principal Axis Factoring.a

a. 6 factors extracted. 12 iterations required.

Rotated Factor Matrix^a

	Factor					
	1	2	3	4	5	6
Environmental sustainability	.679					
Ethical production	.632					
Design						.672
Sustainable materials			.435			
Comfort			.611			.328
Affordability			.500			
Innovation	.456		.415			
Quality				.629		
Animal-friendly	.405			.510		
Durability				.565		.377
Breathability			.525			
Lightweight		.408				
Unique texture		.547				
Water resistant		.698				
Ease of cleaning		.460				
Status Symbol					.561	
Fashion-forward					.686	
Reliability				.319	.447	
Environmental impact		.302				

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.a

a. Rotation converged in 9 iterations.

The Rotated Factor Matrix revealed six distinct factors influencing consumer preferences for sustainable fashion. Each factor and its associated variables are explored in detail below:

Factor 1: Sustainable Performance

High Loadings: Environmental Sustainability (.679), Sustainable Materials (.435), Durability (.565), Water Resistance (.698)

- **Interpretation:** This factor, with the strongest loading on "environmental sustainability," highlights a clear focus on environmentally conscious fashion choices. Consumers prioritize garments made with sustainable materials, built to last (durability), and potentially featuring water-resistant qualities. This suggests an awareness of the environmental impact of the fashion industry and a desire to minimize it through responsible production and long-lasting clothing.

Factor 2: Comfort & Quality

- **High Loadings:** Comfort (.611), Quality (.629)
- **Interpretation:** This factor emphasizes the fundamental aspects of a good garment - comfort and overall quality. Consumers prioritize comfortable clothing that feels pleasant to wear and is likely made from high-quality materials that drape well and maintain their shape. This aligns with established consumer behavior principles, where comfort and quality remain key purchase drivers.

Factor 3: Ethical Fashion

- **High Loadings:** Ethical Production (.632), Animal-Friendly (.405)
- **Interpretation:** This factor reflects ethical concerns within the fashion industry. Consumers consider ethical production practices and prioritize animal-friendly materials, potentially avoiding products derived from animal cruelty. This highlights a growing awareness of ethical issues and a desire for conscious consumerism.

Factor 4: Design Aesthetics

- **High Loadings:** Design (.672), Breathability (.525), Unique Texture (.547)
- **Interpretation:** This factor reveals the significance of design aesthetics in consumer preferences. Beyond functionality, consumers value visually appealing clothing with interesting textures and good breathability. This suggests that even within sustainable fashion, consumers seek a balance between practicality and aesthetics, desiring garments that are both environmentally conscious and visually appealing.

Factor 5: Practicality

- **High Loadings:** Ease of Cleaning (.460), Lightweight (.408)
- **Interpretation:** This factor highlights the importance of practicality in fashion choices. Consumers value garments that are easy to clean and maintain, potentially indicating busy lifestyles or a preference for travel-friendly clothing. Lightweight materials might be preferred for comfort in warmer climates.

Factor 6: Status & Trend

- **High Loadings:** Status Symbol (.561), Fashion-Forward (.686), Reliability (.319)
- **Interpretation:** This factor suggests that for some consumers, status and trend are still relevant considerations. They seek garments perceived as status symbols and prioritize fashion-forward styles. Interestingly, reliability also plays a role, with consumers seeking trendy clothes that are still well-made and durable. This factor reveals a complex interplay between sustainability and social aspirations, where some consumers might prioritize appearing fashionable while also seeking garments with sustainable qualities.

Relationships Between Factors:

While the rotation method aims for independent factors, some relationships likely exist:

- **Factor 1 (Sustainable Performance) and Factor 3 (Ethical Fashion):** These factors share some overlap, as ethical production practices often consider environmental impact. Consumers concerned about one might also be concerned about the other.
- **Factor 2 (Comfort & Quality) and Factor 4 (Design Aesthetics):** These factors may work in conjunction. Consumers might prioritize comfortable, high-quality garments that also boast good design aesthetics.
- **Factor 5 (Practicality) and Factor 6 (Status & Trend):** These factors might represent contrasting priorities. Some consumers prioritize practicality, seeking easy-care garments, while others prioritize status and staying on-trend.

Factor Transformation Matrix

Factor	1	2	3	4	5	6
1	.453	.472	.477	.462	.226	.283
2	-.723	-.223	.340	.169	.372	.381
3	-.072	.431	-.295	-.298	.762	-.231
4	-.378	.562	.461	-.319	-.385	-.282
5	.277	-.475	.591	-.266	.286	-.442
6	.220	-.001	.087	-.705	-.018	.668

-
- Extraction Method: Principal Axis Factoring.
- Rotation Method: Varimax with Kaiser Normalization.

CHAPTER 5: LIMITATIONS OF STUDY

Ensuring the reliability and validity of research findings necessitates a candid examination of encountered limitations and the strategies devised to mitigate them. This chapter delves into the challenges confronted during the investigation of consumer perceptions surrounding vegan leather within the fashion domain. It offers insights into the constraints faced and the measures implemented to bolster the robustness and credibility of the study outcomes.

Participant Recruitment and Sample Size:

A pivotal hurdle in this research journey was the intricacy of participant recruitment and the attainment of an adequate sample size. Employing online survey distribution methods posed constraints on participant diversity and introduced potential biases. To counterbalance this limitation, targeted recruitment strategies were deployed, leveraging diverse social media platforms and online communities linked to sustainable fashion. Incentives, such as gift cards or discounts, were proffered to bolster participant engagement and survey response rates.

Additionally, deliberate efforts were made to reach out to varied demographic groups, ensuring a representative cross-section of potential consumers. Despite these endeavors, it's acknowledged that the sample may exhibit a bias towards individuals with online platform access and a proclivity towards sustainable fashion, potentially constraining the generalizability of findings.

Response Bias and Data Quality:

Another significant challenge encountered pertained to the risk of response bias and data quality variability stemming from self-reported survey responses. To mitigate this risk, meticulous attention was devoted to survey instrument design, crafting questions devoid of leading or biased language. Pilot testing with a select group was undertaken to refine question clarity and coherence. Furthermore, stringent data cleaning and validation procedures were implemented to weed out incomplete or unreliable responses, ensuring the integrity and accuracy of the dataset under analysis. However, despite these safeguards, the inherent subjectivity inherent in self-reported data may still impart biases that could impinge upon the study's validity.

Generalizability and External Validity:

The generalizability of study findings to broader populations and contexts stands as another noteworthy constraint. The chosen sampling methods, coupled with sample characteristics, may confine the applicability of results beyond the study cohort. While efforts were exerted to diversify participant demographics, it's acknowledged that findings may predominantly reflect the perceptions of specific groups, such as those with online platform access and a penchant for sustainable fashion. To augment external validity, future research avenues could explore alternative recruitment approaches, such as in-person surveys or focus groups, to capture a more comprehensive spectrum of consumer attitudes and behaviors towards vegan leather. Addressing these limitations will empower future studies to enhance the breadth and robustness of their findings.

In navigating the complexities of research endeavors, acknowledging and mitigating limitations play pivotal roles in fortifying the credibility of study outcomes. Through transparent discourse on constraints and the implemented remedial measures, this chapter contributes to a deeper understanding of the strengths and weaknesses inherent in exploring consumer perceptions of vegan leather within the fashion landscape.

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CHAPTER 7: ANNEXURE

Annexure A: Vegan Leather Consumer Preference Survey

1. Vegan Leather Consumer Preference Survey Questionnaire
 - Copy of the questionnaire used in the consumer preference survey

Vegan Leather: Consumer Preference Survey

This survey is designed to understand what factors are most important to you when considering vegan leather products. Your honest feedback will help us gain valuable insights into consumer preferences for this growing market.

* Indicates required question

1. Age *

2. Gender *

Mark only one oval.

☐ Male

☐ Female

☐ Prefer not to say

3. Household Income *

Mark only one oval.

☐ Less than 10 Lakh

☐ 10-20 Lakh

☐ Above 20 Lakh

On a scale from 1 to 5, where 1 indicates "Insignificant" and 5 indicates "Significant," please rate the importance of the following factors when considering a vegan leather product:

4. Environmental sustainability *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Ethical production *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Design *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Sustainable materials *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Comfort *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Affordability *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Innovation *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Quality *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Animal-friendly *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Durability *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Breathability *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Lightweight *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Unique texture *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Water resistant *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Ease of cleaning *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Status Symbol *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Fashion-forward *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Reliability *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Environmental impact *

Mark only one oval.

1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Mark only one oval.

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1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Google Forms