



# TRANSITIONING KOLHAPURI CHAPPAL: AN EXPLORATION OF VEGAN LEATHER WITH KOLHAPUR ARTISANS

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**ABSTRACT:** The leather industry is one of the most significant industries in the world, and the footwear market is an essential part of it. India, which is in second place among nations that produce shoes, is a major player in the world economy and has a lot of potential for growth, creating jobs, and exporting shoes. India's footwear manufacture is inherently rooted in manual manufacturing procedures, which contribute to the craft's authenticity. However, because there aren't enough specialized instruments and equipment made to withstand the demands of physically demanding activities, manual operations frequently confront difficulties like low productivity, safety problems, and performance issues.

India has a wide variety of shoes, but the "Kolhapuri Chappal" is highly regarded for its ageless beauty and grace. Traditionally made of animal leather, the recent prohibition on such materials has had a significant impact on the genuineness of this beloved shoe. As a result, even if the classic style has been maintained, the use of synthetic leather has lost its authenticity. Based on field observations, sustainable leather has been found as a feasible substitute to reinstate the genuineness of Kolhapuri Chappals.

The goal of this study is to find out how well-informed and how often manufacturers in the Kolhapur area are about sustainable leather. It seeks to explain why the craftsmen are reluctant to use sustainable leather when making Kolhapuri Chappals. This study aims to offer insights into the practicality and feasibility of switching to sustainable materials within the traditional art of Kolhapuri Chappal production by analyzing the perceptions, difficulties, and potential adoption obstacles.

**Index Terms -** Kolhapuri Chappals, Animal leather, Sustainable leather, Vegan Leather, Leather Footwear, Indian Handicraft

## 1. INTRODUCTION

The leather industry is a major component of world trade and is supported by a variety of industries. Among these, the production of shoes stands out as a crucial contributor, driving growth along the whole leather value chain. India is a major player in this intricate web of footwear production, coming in second place among the nations involved. The Indian footwear industry is a major driver of economic growth and a symbol of cultural legacy due to the deep embedded traditional skill.

India's footwear legacy is centered around the "Kolhapuri Chappal," an enduring representation of grace and custom. Kolhapuri Chappals, which are painstakingly crafted from animal leather and represent centuries-old artistry passed down through artisanal lineages, have decorated the feet of generations. But recent changes in laws and public awareness of environmental issues have forced business to reconsider how dependent it is on materials obtained from animals.



Figure 1. leather market



Figure 2. The leather was first hand-washed after being soaked for roughly half an hour

A major hurdle to the sustainability and authenticity of Kolhapuri Chappals has been the restriction on animal leather. As a result, the market has shifted to synthetic substitutes, albeit at the expense of losing some of this beloved footwear's distinctive qualities. Sustainable leather has emerged as a possible response to the developing market factors that have sparked interest in sustainable alternatives: the drive for authenticity.



Figure 3. Hair-containing outer layer is eliminated the excess leather is removed.

With an emphasis on the craftsmen and manufacturers in the Kolhapur area, this study sets out to investigate whether sustainably produced leather can maintain the authenticity of Kolhapuri Chappals. Through an examination of their knowledge, attitudes, and use of sustainable materials, this research aims to clarify the complexities involved in making the shift to environmentally friendly techniques while preserving traditional craftsmanship.



Figure 4. The footbed and side strap are adhered to

This study aims to identify the drivers, obstacles, and possibilities related to the use of sustainable leather in Kolhapuri Chappal manufacture through a combination of qualitative research techniques, such as field observations, interviews, and case studies. Through an examination of the relationship among customs, environmental concerns, and consumer preferences, this research aims to provide useful information to those involved in the upkeep and development of India's rich footwear history.



Figure 5. The sole is cut based on the marking.

Within the Indian leather industry, the footwear sector emerges as a key driver of economic activity, driving expansion along the entire leather value chain. India's impressive output numbers, which place it second only to China in the world's footwear manufacturing, highlight the country's formidable status as a global footwear powerhouse. India produces 16 billion pairs of shoes a year, which makes about 13% of the world's total output of footwear over a wide range of footwear categories. India's production prowess is evident, as evidenced by the amazing 2065 million pairs that are produced domestically, from leather footwear, which accounts for 909 million pairs, to leather shoe uppers, which total 100 million pairs, and non-leather footwear, which contributes a considerable 2056 million pairs.



Figure 6. To make them permanently fixed, another layer of leather is hammered into the sole



Figure 7. Bee wax is applied to a Cobbler needle to facilitate easy penetration

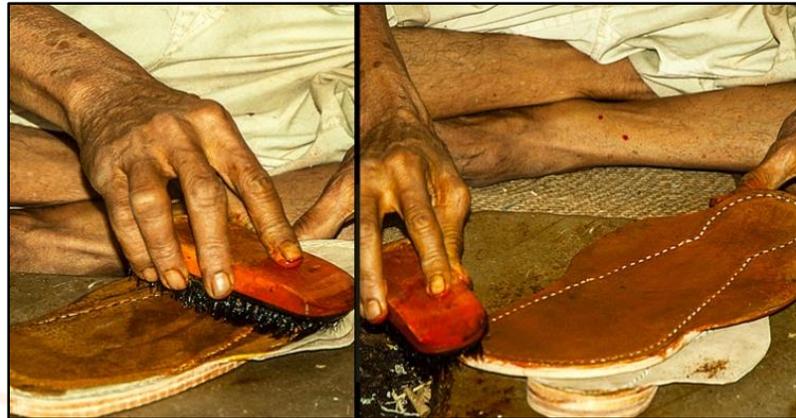


Figure 8. A brush is used to evenly apply colour

Even with 115 million pairs exported, the growing local market consumes over 95% of the footwear produced, with the rest going towards meeting the varied demands of Indian customers. In major manufacturing centers including Tamil Nadu, Maharashtra, Uttar Pradesh, Delhi, and Punjab, the shoe business is booming and employs a vast network of around 1.10 million people. This strong manufacturing environment emphasizes the sector's critical role in satisfying domestic demand as well as its importance as a catalyst for economic expansion and the creation of jobs within India's thriving leather industry.



Figure 9. various colouring procedure steps

## Definitions

**Animal Leather:** This leather is a strong, flexible, and durable material obtained from the tanning, or chemical treatment, of animal skins and hides to prevent decay. The most common leathers come from cattle, sheep, goats, equine animals, buffalo, pigs and hogs, and aquatic animals such as seals and alligators. (7) (Jason, May 2019, p.16)

**Vegan leather:** Vegan leather is created from artificial or plant-based materials rather than using animal skin, which ultimately mimics leather but is eco-friendly in the environment. These materials from which leather is made include pineapple leaves, cork, apple peels etc.

**Leather Footwear's:** Leather footwear is one of the age-old made footweares in the industry, moreover if the leather is animal leather, then it is best known for its durability for ages. The leather industry is now changing from usage of animal leather to eco-friendly leather in footwear industry.

**Indian Handicrafts:** Handicrafts are products which are handmade traditional crafts done by a skilled artisan without using any machine and solely are handmade, naming some these decorative handmade crafts are made from paper, wood, clay, stone, fabrics (hand-woven), metal etc. India thus known for its ethnicity stands out in production of handmade goods which are known as handicrafts. The pieces of art sold from the local artisans from all over India are famous worldwide and proudly stand out to be known as Indian Handicrafts.

## 2. NEED AND PURPOSE OF STUDY

Since the changing trends in the fashion industry, many experiments are taking place in account with the product, fabrics, and other related raw materials. Considering all these perspectives, with changing world each and everything needs to be changed with time, and with it also the industry is now focusing to become more sustainable. This has changed not only in Apparel but also in Footwear industry, Leather industry, Textiles industry etc. Many of the experiments have led to success in contributing towards environment with production of sustainable fabrics (creation from plant-based fibres), sustainable leather (creation from plant-based fibres), sustainable footwear (creation from reusing environmentally friendly materials), etc.

Leather industry is one of them which is demanded worldwide and requires license to use animal leather. For this purpose, sustainable leather concept came in form to stop using and killing animals to make leather. With this context footwear industry must be considered as major leather using industry, and many of regions from India need to look into it as a need to stop using Fake or actual animal Leather. Thus, the need and purpose of this study is to create awareness amongst the producers of Leather footwear, at the same time introducing and encouraging local artisans to use sustainable and vegan materials.

## 3. OBJECTIVE

The objective of this study is to examine the feasibility and consequences of switching from animal leather to sustainable or vegan leather in the Kolhapuri Chappal production process. The study's specific objectives are to:

- To investigate the usage of vegan leather in Kolhapuri chappals.
- Investigate Kolhapuri chappals and the making process.
- To investigate the level of knowledge among Kolhapuri Chappal Makers (Chamkars) about the idea of sustainable or vegan leather.
- Evaluate Kolhapuri Chappal makers' and artisans' understanding and attitudes of vegan or sustainable leather as a substitute raw material in the Kolhapur region.
- Determine the factors promoting or impeding Kolhapuri Chappal production's transition to vegan or sustainable leather.
- Analyze the opportunities and difficulties involved in incorporating vegan or sustainable leather into Kolhapuri Chappal manufacture, a traditional art.
- Examine the possible effects on Kolhapuri Chappals's authenticity, competitiveness in the market, and environmental sustainability of switching to vegan or sustainable leather.
- Provide suggestions and analysis to stakeholders, including manufacturers, consumers, policymakers, and artisans, to support the long-term development of Kolhapuri Chappal manufacturing while safeguarding its handicrafts and cultural legacy.

## 4. ABOUT KOLHAPURI AND ORIGIN OF KOLHAPURI CHAPPALS

Kolhapuri Chappals originate from the historical city of Kolhapur in Maharashtra, India, and are well-known for their classic elegance and handcrafted craftsmanship. These classic shoes have won praise from all across the world for their unique styles, dependability, and cultural relevance. Kolhapuri Chappals, which are painstakingly crafted by knowledgeable artisans utilizing age-old methods handed down through the generations, are the pinnacle of Indian artistry and legacy.



Figure 10. Kolhapuri Chappal Market

## 5. ORIGIN OF KOLHAPURI CHAPPALS

Kolhapuri Chappals have a heritage in the rich cultural legacy of Maharashtra and date back several centuries. Because of their comfortable form and strong construction, these sandals were historically worn by farmers, shepherds, and artisans throughout the region, making them ideal for the rough terrain and hot climate of the Deccan Plateau. According to legend, Kolhapuri Chappals came to prominence in the 17th century, during the Maratha Empire's rule. Skilled shoemakers in Kolhapur refined their trade under the patronage of Maratha monarchs, creating shoes that combined elegance and usefulness.

Kolhapuri Chappals, which are distinguished by their unique toe-loop pattern and sturdy, simple construction, quickly came to represent status and cultural identity. Their comfort and adaptability won them praise as they were worn for a variety of circumstances, including formal affairs, joyful festivities, and everyday activities. Kolhapuri Chappals have captivated global fashionistas and shoe aficionados for years, despite their territorial limitations. These timeless sandals, which continue to represent the unmatched skill of Kolhapuri artisans and the rich cultural legacy of Maharashtra, have maintained their authenticity and charm in the face of changing fashion trends.

Kolhapur in the state of Maharashtra stands out as one of the most lasting and traditional hubs of handcrafted footwear manufacture among all the major centres of footwear in India. The art of making "Kolhapuri Chappals" has been carefully passed down through the years and kept here. These recognizable sandals, which are sought after all over the world for their outstanding craftsmanship and classic charm, have crossed national boundaries.

Beyond its prominence in leather crafts, Kolhapur has a diverse population. Celebrated for its delectable food and held in high regard as a religious hub, especially for the adoration of the goddess Mahalaxmi, the city epitomizes a fusion of spiritual devotion and cultural energy. Chhatrapati Rajarshi Shahu Maharaja of the Maratha dynasty ruled Kolhapur as a princely kingdom in the past. It was in his reign that craftsmen who made Kolhapuri Chappals were called "Chamkars," a designation indicating their proficiency in turning animal hide into beautiful shoes.

However, the authenticity and sustainability of Kolhapuri Chappals have recently faced a serious threat due to the restriction on animal leather. As a result, the market has moved towards imitations made of synthetic materials, undermining the classic qualities of these beloved sandals. However, in the middle of this change, vegan or sustainable leather offers a viable way to maintain Kolhapuri Chappals' originality while still adhering to modern ethical and environmental standards.

The goal of this study is to investigate the switch from using animal leather to using sustainable or vegan leather when making Kolhapuri Chappals. This research aims to comprehend the reasons behind this paradigm change as well as the opportunities, difficulties, and challenges it presents by undertaking an exploratory study. Additionally, it seeks to clarify how adopting vegan leather might both preserve the uniqueness of this age-old handcraft and establish Kolhapuri Chappal producers as major participants in the rapidly growing vegan footwear market.

## 6. RESEARCH PROBLEM

Kolhapuri Chappals is a major, long-standing industry that is well-known throughout the world and is significant to the leather sector. Originally, the main raw material for these Kolhapuri Chappals was animal hide, which was then traditionally hand stitched. However, as time went on and fashions changed and animal leather usage was outlawed, fake leather—which is allegedly bad for the environment and loses its authenticity—replaced the primary raw material. Given that these are significant issues, research is necessary to preserve Kolhapuri Chappals' art and promote a green environment. By resolving these issues, this industry may see an increase in demand from abroad.

For Kolhapuri Chappals, transitioning from animal leather to sustainable or vegan leather faces a variety of difficulties for local producers and craftspeople in Kolhapur. While the need to use eco-friendly materials is driven by regulatory requirements and environmental concerns, authenticity and workmanship must always come first. However, there is a serious study dilemma because the reasons, attitudes, and difficulties related to this change are poorly understood.

### 6.1 The following queries are at the center of the research problem:

- a. Why would craftspeople and producers in the Kolhapur area think about switching from using animal leather to using vegan or sustainable leather to make Kolhapuri Chappals?
- b. What do stakeholders think about the feasibility and ramifications of using vegan or sustainable leather in Kolhapuri Chappal production?
- c. What challenges must manufacturers and craftspeople overcome to switch to vegan or sustainable leather, and how do these obstacles affect the transition's viability?
- d. What effects does the use of vegan or sustainable leather have on Kolhapuri Chappals' environmental sustainability, competitiveness in the market, and authenticity?
- e. What tactics can be used to help make the switch to vegan or sustainable leather happen while maintaining the workmanship and cultural legacy of Kolhapuri Chappals?

## 7. REVIEW OF LITERATURE

The research related to Kolhapuri Chappals and the shift towards sustainable or vegan leather provides insightful analysis on a range of topics, including historical background, cultural relevance, environmental factors, and economic ramifications.

- 7.2 Historical and Cultural relevance:** Within the larger framework of Indian footwear traditions, numerous academics have examined the historical origins and cultural relevance of Kolhapuri Chappals. Desai's (2017) and Patel's (2019) studies explore the history of Kolhapuri Chappals, charting its development from prehistoric periods to the present. These pieces emphasize Kolhapuri Chappals' skill, significance, and social duties while highlighting their status as a piece of cultural heritage.
- 7.3 Environmental Considerations and Sustainable Practices:** The environmental impact of leather production and the growing awareness of sustainability issues have spurred interest in alternative materials such as sustainable or vegan leather. Research by Sharma et al. (2020) examines the environmental footprint of traditional leather production methods and explores the potential of sustainable alternatives to mitigate environmental harm. Similarly, studies by Jain (2018) and Singh (2021) investigate the feasibility and implications of adopting vegan leather in the fashion industry, shedding light on its environmental benefits and market potential.
- 7.4 Economic Implications and Market:** Trends: academic research has also been drawn to the economic dynamics of Kolhapuri Chappal production and the market trends influencing the switch to sustainable materials. The economic feasibility of sustainable leather manufacturing and its consequences for the Indian footwear industry are examined by Gupta (2019). Additionally, research on consumer preferences, market demand, and branding strategies pertaining to sustainable footwear is being conducted by Mishra (2020) and Joshi (2021). These studies provide valuable insights into the potential commercial possibilities of Kolhapuri Chappals composed of vegan or sustainable leather.
- 7.5 Opportunities and Challenges:** Although there is an increasing movement towards sustainable alternatives, there are still obstacles in the way of Kolhapuri Chappal production switching from traditional materials to sustainable or vegan leather. Barriers include supply chain complexity, cultural resistance, and technological restrictions, according to research by Khan (2020) and Agrawal (2021). These studies do, however, also point to chances for creativity, teamwork, and competitive advantage that may propel the effective implementation of sustainable practices in Kolhapuri Chappal manufacture.
- 7.6 Case Studies and Industry Practices:** Reports from the industry that detail the experiences of shoe companies switching to vegan or sustainable leather provide useful information on the potential and difficulties that come with this change. The studies elucidate optimal methodologies, insights gained, and tactics for effectively maneuvering through the transition phase. Through a comprehensive analysis of extant literature, this study endeavors to expand upon the present understanding and provide novel perspectives on the feasibility and consequences of utilizing sustainable or vegan leather in the manufacturing of Kolhapuri Chappals.

This article reported by Basu S.K. titled with "Status of leather Industry in India" states regarding the Leather tanning sector per year production to be 2 billion sq. ft. Which is said to be 10% of leather requirements. Compared to other countries, India stands second in the production of leather goods and Leather Footwear. In Indian leather market approximately 1,950 million pairs i.e., 95% from total production are sold in domestic market itself. Whereas, leather goods exported from Indian market, contribute to total of 44.32% from this sector. It can be said as from the leather footwear sector, 54% of them comprise of Men's' goods including footwear, 37% of them are women leather goods and lastly 9% contribute towards Kid's section. Indian Leather industry thus has a production capability of nearly 63 million pieces (annually) and stands out in the international market. Therefore, from this article it can be concluded that giving Kolhapuri chappals a remarkable place in Indian Leather goods not only will encourage the local Artisans but will also provide them livelihood. This exploratory study will also revile about the importance of sustainable leather goods and can create a miracle in leather industry by experimenting in different Leather goods. (1) (Basu S. K., April- May 2011, PP.9)

This Research paper- "Environmentally Friendly and Animal Free Leather: Fabrication and Characterization" has concluded by producing environmentally friendly leather which is vegan leather. The study from this paper show that, there is possibility of production of animal free leather which have somewhat similar properties of original leather in it and are produced by usage of biomaterial. The researcher states that the bio-based leather shows similar Physicochemical and mechanical properties same as animal leather. The study thus has successfully characterized by producing animal free leather. The materials used to produce this vegan leather are agro-waste sources of KBC, maple leave pulp as filler extracted from dry waste leaves, and additives such as biodegradable polyesters and plasticizers, from which successful creation of breathable vegan leather is done. From the review of this paper, it can be said that many experiments are taking place for creation of Sustainable leather for the sake of avoiding animal leather. Vegan leather industry is yet to be the future of Leather goods and soon it should be encouraged to be used by local artisans so that it will be globally accepted. (2) (Saha)

It is published by Global Industry Analysis, Trends, Size, Share and Forecasts to 2025, the report study estimated the market for vegan leather will reach up to 89.6 billion by 2025, with a compound annual growth rate of 49.9%, in the forecast period. In the world's economy leather industry plays an important role and is said to be one of the most demanded industries in world. The report also states, globally demand for Vegan Leather is rising across industries like furnishing, automotive, clothing, bags, and others. With this growing awareness and importance about animal rights which suggest about rules and regulations for Animal cruelty, these play an important role to boost and encourage consumers to purchase animal-free products. As an effect of this Vegan leather production has started to get demand. Many stakeholders globally are encouraging R&D in this field of Vegan leather and developing a superior quality leather to be used in the market. This report forecasted that in coming years, Vegan leather will be capturing the global market and majority will be Footwear and Automobile industry. Hence, demand for Vegan Leather will be stable in near future. This report clearly states that rising demand for vegan leather will ultimately encourage production of vegan leather goods which are being made from Fake or animal leather, and this can be applied in Indian Leather market through encouraging them to use Vegan leather. (3) (Athavale, March 2020)

The writers of the project, “Evolving an ICT Platform for a Traditional Industry Transforming into Entrepreneurs” have described about Indian Leather and Footwear Industry. The brief of this project was to tech artisans' new technology and usage of new machinery to produce the Kolhapuri Chappals with various designs and marketing, as these are handmade products, under ICT (Information and Computer Technology) intervention. The project report also states that after implementing ICT the income of the artisans is seen increased and also the process of making chappals have gained speed. Thus, this report talks about how technology has evolved by changing the lives of the artisans, similarly if such more projects could take place for the artisans related to the Raw materials or giving them knowledge about the trends and also about the large market place of Vegan products, it will definitely create large amount of income for them as well as they will be a large part of the Indian Vegan Footwear Industry. (4) (B. Bowonder, S. Sadhulla and Akshay Jain, 2006)

The report published by The Economic Times, talks about the major challenge that the Chamkars had to face was related to Beef Ban in Maharashtra. For the past decade, activists, educational institutes, politicians and administrators have been all trying to resuscitate this struggling sector, which has strived to grow out of its cottage industry roots. Kolhapur’s business isn’t driven by small units, instead, it is dozens of family-run operations within the city and a two- or three-hour drive that comprise this ecosystem. This lack of scale has led to their downfall since they don’t have the heft to upgrade their capabilities — either in terms of skill or tools of their trade. For the past five or six years, the business has been slowly sinking and thousands of crafts people are wondering when to flee this burning ship. Artisans don’t have the financial strength to deal with mounting losses, improve their skills and then consider expanding into related segments such as accessories. Reviewing the article on Beef ban it is now seen that the Kolhapuri Chappals are either made from Fake leather or original chappals can be made only by those artisans who have license to make them out of original leather (animal leather by these artisans is brought from some neighbouring states of Maharashtra, and no animal is killed to take their hide, that animal hide is used who are dead naturally and not killed.). The government yet again should think about various training programmes for these artisans giving them knowledge about upcoming industry trends to revive this traditional art. (5)

An article related to Kolhapuri Chappals, formulated about how the artisans are having major challenges due to Covid-19 pandemic. Covid-19 has majorly affected many industries and forcing them to shut down, the traditional Kolhapuri Chappals industry is also on same way, yet there are very few of them practicing the actual traditional art. Many efforts have been put up by the artisans by keeping up with trends and catering the international market yet there is still a need to encourage them with conducting different programme.

The report has mentioned that recently, Union Commerce and Industry Minister Piyush Goyal said that export of Kolhapuri chappals could fetch ₹7,500 crore. For instance, firms that manufacture the Kolhapuri chappals could enter into agreements with five-star hotels whereby this footwear could be kept in the almirah of the guestrooms. Customers could then try these out and buy them, should they like it. Such initiatives should be on larger scale as to encourage the local artisans and taking them into international market where they could present Indian handicrafts, with this Government should also allot some funds for the artisan's encouragement to stop the traditional art from vanishing. (6)

From the above review it can be concluded that, the Chamkar’s face many challenges in context from beef-ban till covid-19 pandemic and with this the artisans from Kolhapur also have an opportunity to come up and stand in the international market, also for which many government initiatives are needed. From perspective of changing the major raw material used in Kolhapuri Chappals the leather, this study will have a scope for the artisans in the Vegan Leather Industry. There are many studies done on Kolhapuri chappals like changing its sole from hard to soft, using machineries, usage of blocks to make the chappals, even in leather industry many experiments for Vegan leather are taking place. The mixture of these two is conclude in this paper.

The written work, taken as a whole, highlights the complex historical, cultural, environmental, and economic aspects of Kolhapuri Chappal production's shift to sustainable or vegan leather. This review establishes the foundation for additional empirical research in this area and offers a thorough grasp of the opportunities and difficulties presented by this paradigm shift by combining insights from these many sources.

## 8. RESEARCH METHODOLOGY

- 8.1 Research Design:** To examine the shift in Kolhapuri Chappal production from animal leather to sustainable or vegan leather, this study uses an exploratory research methodology. Qualitative research approaches will be used in the research design to obtain comprehensive insights into the perspectives, incentives, and obstacles faced by industry players.
- 8.2 Data Collection:** Manufacturers, craftsmen, and other important players in the Kolhapur area will be interviewed in semi-structured interviews to gather data about Kolhapuri Chappal. The interview data will also be supplemented with field observations and document analysis, offering a thorough grasp of the research issue.
- 8.3 Sampling:** To choose individuals with knowledge and experience pertinent to the study's goals, purposeful sampling will be employed. The group will consist of artisans from Kolhapuri Chappal, producers, suppliers of vegan or sustainable leather, and industry professionals who are aware of the shift in the footwear sector towards alternative materials.
- 8.4 Data Analysis:** The field notes, interview transcripts, and document extracts will all be examined using qualitative data analysis approaches like theme analysis. To get significant conclusions and insights, themes and patterns that emerge from the data will be recognized and analyzed.
- 8.5 Ethical Considerations:** Throughout the study, careful adherence to ethical rules for research involving human subjects will be maintained. All participants will be asked for their informed consent, and confidentiality and anonymity will be maintained until the results are reported.

Using a strict research approach, this study seeks to give stakeholders in the footwear industry a thorough understanding of the shift in Kolhapuri Chappal manufacture to sustainable or vegan leather, as well as its repercussions.

## 9 QUESTIONNAIRE: EXPLORING THE TRANSITION TO SUSTAINABLE LEATHER IN KOLHAPURI CHAPPAL PRODUCTION

First, Thanks you very much and I really appreciate your participation in this study. The survey is aiming to collect information about views, motivating factors, and difficulties surrounding the switch from animal leather to sustainable or vegan leather in Kolhapuri Chappals manufacturing. Your answers will provide insightful details that will further our comprehension of this subject. Please provide the most accurate response you can to the following questions.

### 9.1 Demographic Information

Age:

Gender:

Occupation:

Years of experience in Kolhapuri Chappal production:

### 9.2 Awareness and Perceptions

a. Are you aware of the transition from animal leather to sustainable or vegan leather in the production of Kolhapuri Chappals?

Yes

No

b. What are your perceptions of sustainable or vegan leather as an alternative to animal leather in Kolhapuri Chappal production?

### 9.3 Motivations and Challenges

a. What factors motivate you to consider transitioning to sustainable or vegan leather in Kolhapuri Chappal production?

b. What are the main challenges you foresee in transitioning to sustainable or vegan leather?

c. What are the major sources of raw materials and what are the basic steps involved in making Kolhapuri Chappals?

### 9.4 Current Practices:

a. Are you currently using sustainable or vegan leather in your Kolhapuri Chappal production?

Yes

No

b. If yes, what motivated you to make this transition?

c. If not, what factors have prevented you from adopting sustainable or vegan leather?

### 9.5 Market Demand and Competitiveness:

a. Do you perceive a demand for sustainable or vegan leather Kolhapuri Chappals in the market?

Yes

No

b. How do you think the adoption of sustainable or vegan leather could impact the competitiveness of Kolhapuri Chappals in the market?

### 9.6 Environmental Sustainability:

a. Do you believe that transitioning to sustainable or vegan leather is important for the environmental sustainability of Kolhapuri Chappal production?

Yes

No

b. What environmental benefits do you associate with using sustainable or vegan leather?

## 9.7 Future Outlook:

- Where do you see the future of Kolhapuri Chappal production in terms of material innovation and sustainability?
- What support or resources do you think would be helpful for artisans and manufacturers transitioning to sustainable or vegan leather?

## 10 DATA ANALYSIS AND INTERPRETATIONS

### 10.1 Reasons for Making the Switch to Vegan or Sustainable Leather:

**Analysis:** Based on the responses, it was determined that the main drivers behind Kolhapuri Chappal production's shift to sustainable or vegan leather are the need to comply with regulations, consumer demand for eco-friendly products, and the desire to uphold ethical standards.

**Interpretation:** The results point to an increasing awareness and understanding within the industry of the need to implement sustainable practices, driven by internal principles of sustainability and responsibility as well as external pressures.

### 10.2 Views of Vegan or Sustainable Leather:

**Analysis:** In general, stakeholders have a positive opinion of vegan or sustainable leather and see it as a good substitute for animal leather that is equally attractive, strong, and of a similar caliber.

**Interpretation:** Positive opinions on vegan or sustainable leather show that stakeholders are open to adopting new materials that respect ethical and environmental standards without sacrificing the authenticity or quality of the final product.

### 10.3 Challenges in Making the Switch to Vegan or Sustainable Leather:

**Analysis:** The main issues raised are the scarcity and high price of vegan or sustainable leather, manufacturing process technical difficulties, doubts regarding the legitimacy of the product and its marketability, and the requirement for skill development and training.

**Interpretation:** These difficulties draw attention to the difficulties and obstacles involved in switching to vegan or sustainable leather, highlighting the necessity of focused interventions and support systems to encourage the use of substitute materials.

### 10.4 Impacts on Sustainability, Competition, and Authenticity:

**Analysis:** The use of vegan or sustainable leather is thought to have a positive effect on Kolhapuri Chappals' environmental sustainability, competitiveness in the market, and authenticity by making the product stand out from the competition, making it more ethically appealing, and lowering the environmental impact of production.

**Interpretation:** According to these results, switching to vegan or sustainable leather could help achieve sustainable development objectives while still preserving the legacy and authenticity of Kolhapuri Chappals.

### 10.5 Techniques for a Smooth Transition:

**Analysis:** Stakeholders propose a few tactics to help ensure a smooth transition, such as government funding for R&D, easy access to reasonably priced, high-quality sustainable materials, programs to develop the skills and abilities of artisans, and cooperation between stakeholders throughout the supply chain.

**Interpretation:** To overcome adoption barriers and promote innovation in Kolhapuri Chappal manufacture, these recommendations emphasize the significance of cooperative efforts and supporting policies.

Overall, the data analysis highlights the motivations, perceptions, challenges, and potential implications of transitioning to sustainable or vegan leather in Kolhapuri Chappal production. By understanding these dynamics, stakeholders can develop informed strategies to navigate the transition process effectively while ensuring the sustainability and authenticity of this traditional craft. Leather, which comes from a variety of animals including buffaloes, goats, or cows, is traditionally one of the main raw materials used to make Kolhapuri Chappals. But as we move toward more environmentally friendly or vegan substitutes, sources might also include synthetic or plant-based materials like polyurethane, rubber, or cork.

The basic steps involved in making Kolhapuri Chappals typically include:

**Designing:** Using customary themes and styles that have been passed down through the years, artisans begin by creating the shape and pattern of the chappals.

**Cutting:** After the design is complete, specialized instruments are used to carefully cut the leather or other material into the necessary shapes and sizes.

**Punching:** To make sewing and ornamental features easier, holes can then be punched along the edges of the chappals.

**Stitching:** Skilled artisans use a needle and thread, or occasionally a sewing machine, to stitch the various parts of the Chappals, such as the sole, straps, and embellishments, together.

**Assembly:** To obtain the appropriate form and fit, the constructed Chappals are further molded and sculpted.

**Finishing:** To improve longevity and beauty, the Chappals are subjected to final touches such as buffing, polishing, or the application of protective coatings.

Throughout these stages, craftspeople frequently add elaborate details and embellishments, including metal accents, beadwork, or embroidery, to give the finished piece more aesthetic appeal and cultural importance. Every Kolhapuri Chappal is an exquisite example of the skill and artistry of the people who make them by hand.



Figure 11. Pineapple and Mushroom vegan leather

## 11 CONCLUSION

Thus, the research concludes an exploratory study from the standpoint of making Kolhapuri Chappals in vegan leather, a long-standing traditional handcraft of Maharashtra, employing raw materials such as fake or animal leather. The study also discovers that Kolhapur's native craftspeople are aware of the vegan footwear market and how it might contribute to the preservation of their trade. In addition, the research is examined in relation to vegan and animal leather. The results of this exploratory study also advise the craftspeople making Kolhapuri chappals on the vegan industry and how altering the primary raw material used in their production leather may increase the chappals' demand abroad in comparison to their current level of demand.

Some people do not want the originality and authenticity of the craft to be altered, even though some brands have made mistakes by improvising vegan leather into Kolhapuri Chappals and altering their designs. In order to cater to this group, the primary artisans from Kolhapur itself could begin making Kolhapuri Chappals in vegan leather. In conclusion, Kolhapuri Chappals are among the most sought-after and durable crafts in Maharashtra; but, if some innovations were made and they were reintroduced into the market using sustainable or vegan leather, they might become even more well-known.

In conclusion our study has illuminated the intricacies and consequences involved in switching from animal leather to sustainable or vegan substitutes in the manufacturing of Kolhapuri Chappals. A number of important conclusions have been drawn from an investigation into awareness, perceptions, motivations, obstacles, and opportunities. Due to regulatory demands, shifting consumer tastes, and environmental consciousness, players in the Kolhapur region show a remarkable knowledge of sustainable or vegan leather as an alternative material. Although there are generally favorable opinions of alternative materials, adoption is severely hampered by ongoing worries about their quality, price, and availability.

Despite these challenges, craftsmen and producers are very motivated to adopt eco-friendly methods and introduce new ideas into the age-old skill of Kolhapuri Chappal manufacturing. Industry stakeholders are aware of and appreciate the potential advantages of switching to vegan or sustainable leather, including increased market competitiveness, environmental sustainability, and cultural heritage preservation.

Moving forward, government agencies, business associations, and other stakeholders will need to work together and provide supportive interventions in order to overcome the difficulties that have been identified. The widespread adoption of sustainable practices within the Kolhapuri Chappal industry will be greatly aided by initiatives that improve access to high-quality, reasonably priced sustainable materials, facilitate skill development and training programs, and increase consumer acceptance.

Stakeholders may map out a course for a future for Kolhapuri Chappals that is more resilient and sustainable, one that embraces innovation and responsible resource management while respecting tradition, by utilizing the insights gained from this research. The industry's identity and future prosperity will continue to depend heavily on maintaining authenticity, workmanship, and cultural legacy as it navigates the complex and quickly changing market landscape.

## 12 AREA FOR FURTHER STUDY

Further studies might be done on artists and their role in maintaining the craft, including the financial aspects of it and any government programs or contributions made on behalf of these Kolhapuri Chappal producers.

Further studies could be conducted on the production of vegan leather Kolhapuri Chappals to demonstrate that this type of footwear can be made from sustainable leather, which could benefit the leather footwear industry and provide a means of subsistence for the Chamkars (those who make Kolhapuri Chappals).

Future research may also focus on equipping the Kolhapuri (Chamkars) artisans in the area with cutting-edge technologies and using them to maintain their customary trade.

The current study solely focuses on leather footwear, specifically on Kolhapuri Chappals. Future research could examine a wider range of traditional leather footwear from different regions of India.

Future research can also be conducted using a variety of leather items, which are currently in greater demand on the national and international markets and use sustainable leather.

The consumer's point of view could be the subject of additional research on the issue of Kolhapuri Chappal production switching to sustainable or vegan leather. While a lot of focus has been placed on comprehending the reasons behind, perceptions of, and

difficulties faced by manufacturers and craftspeople when implementing alternative materials, investigating consumer attitudes, preferences, and behaviors regarding vegan or sustainable leather Kolhapuri Chappals could yield important insights.

A thorough investigation might investigate things like perceived environmental impact, product legitimacy, cost concerns, and general contentment with alternative materials that affect consumers' decisions to buy. It would also be beneficial for industry stakeholders to assess how well product positioning, communication channels, and marketing strategies work to promote vegan or sustainable leather Kolhapuri Chappals to target consumers.

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