

# Employing Indigenous Craft Traditions for the Contemporary World: Opportunities for Innovation and Market Expansion of Sawantwadi Wooden Toys in India

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## Abstract

India is well-known for its rich indigenous arts and crafts tradition, with over 360 traditional crafts practiced nationwide. These crafts are the creative expressions of artisans who use natural materials like wood, metal, and textiles to make items such as toys, accessories, and home decor. Sawantwadi is well-known for its wooden toys and Ganjifa cards. The Chitari community practices these crafts traditionally to make toys such as dolls, culinary sets, miniature cars, bullock carts and replicas of fruits and vegetables. They are eco-friendly, durable, and safe for children. Despite the environmental benefits and cultural significance, artisans confront several obstacles, such as a lack of materials, workforce, availability of tools and competition. Considering growing interest of the customers in green products, this study investigates opportunities for market expansion and innovation of these wooden toys.

The research employs semi-structured interviews with artisans to understand the operational activities. A strategic analysis of the Sawantwadi wooden toys highlights the need for enhanced finance, infrastructure, technology, and design support.

The findings support designers, policymakers, and craft communities in sustaining, scaling, and innovating traditional toy-making practices. The paper concludes that wooden toys from Sawantwadi possess strong cultural and traditional values but face challenges that require strategic approaches. A sustainable approach to innovation, market diversification, strengthening artisan clusters, integrating technology, and promotion through digital and tourism channels can balance global competitiveness with the traditional values of Sawantwadi wooden toys.

**Keywords:** Traditional wooden toys, Sawantwadi wooden crafts, Eco-friendly toys, Artisanal craftsmanship, Cultural heritage preservation, India.

## Introduction

India is known for its deep-rooted tradition, diverse culture, and unique combination of hues, patterns, styles, and motifs. Indian villages have creative competencies demonstrating the art of making and transforming materials and spaces through daily creations. Crafts are among the most influential self-development sources for the generation of sustainable employments for many people living in challenging economic conditions (Bhat and Yadav, 2016). Craft is “an item that fulfils a function, requires the use of hands to create, and uses materials identified as natural” (MacEachren, 2004). Crafts are innovative cultural and traditional expressions of rural areas. However, Bairagi and Selvadhas (2023) point out that craft is one of the unorganized sectors in terms of employment. It is also a creative expression of the local community. These expressions use locally available materials with motifs, styles, and natural colors.

More than 100 crafts are established and practiced in various parts of India. Sawantwadi is one of the clusters where artisans practice wooden toys and ganjifa cards (Ranjan et al., 2007). These toys are made traditionally by the Chitrari community, which migrated from the south (Mangaonkar-Vaiude and Joshi, 2021) and is well known as a “Lakdachi Khelani” in the state of Maharashtra (Chavan and Chandar, 2022). Wooden fruit and vegetable plates, Bullock carts, replicas of vintage cars, animals, and moving toys like railway, truck, etc., are the famous toys of Sawantwadi (Baral et al., 2016).

Significant evidence of Sawantwadi toys is available from 1889. Balkrushna Gupte mentions “Sawantwadi's chitar kam” in his book, explaining the process of lacquerware over the flat surfaces of products (Gupte, 1889). In the 18th and 19th centuries, the Chitrari community became royal patronage because of their artistic work in lacquer. The Sawant Bhosale family established many workshops to generate innovative toys in 1971 (Preserving Artistic Tradition, 2022). Currently, Sawantwadi toys have received a G.I. tag. Due to commercial success, other communities in the Kolgaon, Sawantwadi area has adopted this craft (Baral et al., 2016). In fact, Sawantwadi Toys have provided a steady income to artisans and have involved many stakeholders. However, due to globalization, they are going through tough competition from internal and external competitors, big business houses and MNCs. For survival in the market therefore, it is necessary to focus on handicrafts and increase awareness about eco-friendly toys (Prabhudesai, 2021). Plastic toys specially made in China influence the market for wooden toys. Hence, for the survival of wooden crafts, the government must take concrete steps.

According to Jain (2017), today, fewer than ten artists practice Sawantwadi wooden toys. The Kanekar family is one of the families that are still involved. For the last four generations, the Kanekar family has been in the business of wooden toy making. Very few families are trying to preserve the Sawantwadi craft. Nevertheless, as Jadhav (2020) points out, plastic toys, mainly imported from countries such as China, Taiwan, and the U.S.A., are reducing the market for wooden toys.

Sawantwadi toys are made by using seasonally available pangira (Indian coral tree) wood, mango wood, and jackfruit wood. Nowadays, Artisans are dependent on seasonally available wood. They purchase them, cut them into small logs, and remove the moisture before storing it (Baral et al., 2016; Mangaonkar-Vaiude and Joshi, 2021). Then, the artist follows the basis-making process by cutting, shaping, coloring, and assembling. For making, they practice the traditional manual methods. After cutting the wooden blocks, methods such as chiseling, sanding, and drilling are followed to shape different toys. For coloring, natural colors are used. For economic production, artisans have started to use readily available colors in the market (Mangaonkar-Vaiude and Joshi, 2021).

Basic background information of Sawantwadi toys is shown in the Table 1.



**Fig 1:** Display of Sawantwadi toys at local shop

Source: Author



**Fig 2:** Different varieties of Sawantwadi wooden toys

Source: Baral et al., 2016

**Table 1.** Background information of Sawantwadi wooden toys

Source: Author

No.	Specifications	Sawantwadi toys
1	Location	Dist. Sindhudurg (Maharashtra)
2	Community	Chitari or Chitrakar (communities migrated from Karwada and settled in Sawantwadi)
3	Material	Wood from pangira and mango tree, flat shaped solid wood
4	Methods	chiseling, carving, sanding
5	Coloring process	Oil based colors, color powder is mixed with wood primer and applied on the toy using brush
6	Traditional Products	Wooden fruits, Bullock cart and various animals, etc.

### Significance of Sawantwadi Wooden Toys

Crafts are the cultural and traditional representations of the rural areas. They create a sustainable source of self-development and employment generation, providing artisans a steady income (Bhat and Yadav, 2016). Wooden toys practiced indigenously are eco-friendly. This is because they are made using locally available natural materials such as wood (Rangaswamy et al., 2018). Wood and bamboo are the primary materials used to make sustainable toys. In manufacturing, it creates significantly less wastage, which can be used again.

Wooden toys are more open-ended and made to bring kids near to Nature, which helps them to improve their focus (Ikei et al., 2017). They also have a positive psychological impact on users of different ages. In fact, they also provide tactile expressions and a critical learning experience, which helps people to increase their imaginations. Indeed, they are also helpful for stress reduction and improving immune systems (Ikei et al., 2017). Wooden toys have the potential not to harm people and the environment. Moreover, wooden toys are very simple to make using any wood block. Wooden handicrafts take care of the local economy, cultural heritage and users. They provide a steady income to the artisans, who make them in the workshops and sell them directly in the local or nearby markets (Jain, 2017; Prabhudesai, 2021).

Considering the current operational activities performed by the artisans and the significance of the wooden toys, this research aims to investigate the opportunities for innovation and market expansion for the wooden toys in the context of Sawantwadi wooden craft. Its objectives are as follows.

1. To identify the strengths of Sawantwadi wooden toys, including cultural values and craftsmanship skills.
2. To examine the weaknesses in the current operational activities of Sawantwadi wooden toys.
3. To explore the opportunities and potential threats in the growth of Sawantwadi wooden toys.
4. To recommend strategies for leveraging strengths and opportunities while addressing weaknesses and mitigating threats to ensure the sustainable growth of Sawantwadi wooden toys.

### Theoretical Framework

Indigenous Handicrafts are the creative expressions of the artisans made by using locally available materials for purposes such as rituals and entertainment (Khan and Amir, 2013). Artisans connect these crafts emotionally by taking inspiration from Nature and what they see. It provides the concept of art-craft-culture that creates the foundation for the Sawantwadi wooden toys. Art refers to the creative expressions and aesthetics of the product through the motifs that have symbolic meaning and emotions. Craft emphasizes the handmade production techniques that generations have practiced (Yadav, 2020). Culture is a part of art and craft as it provides values, traditions, history, and identity. Handcrafted wooden toys from Sawantwadi not only play objects but also creative imaginations of the artisans, handicraft skills, and the culture of the Konkan region of India. From the art-craft-culture perspective, cultural values describe their ability to preserve heritage, transmit identity, and connect communities across time. At the same time, the craft should adapt to the new customer demands, technologies and markets. Therefore, innovation is an important bridge between the culture and the market. Diversification of toys and awareness about them help preserve this craft in the market.

This theoretical framework links cultural value, sustainability, and innovation, providing the foundation for the recommended strategies to achieve opportunities by considering the strengths and addressing weaknesses and threats by ensuring the sustainable growth of the Sawantwadi wooden toys. Traditional values highlight that these toys are not just toys but carry a regional identity, which makes them valuable for sustaining as a local heritage (Ameyaw et al., 2024). These values also connect to the generations through the knowledge transmission and the making processes. Sustainability is not limited to environmental concerns; it includes social, cultural, and economic dimensions and creates a sustainability triangle



(Walker et al., 2019). It focuses on bearable, equitable, and viable perspectives. Innovation in traditional crafts tries to balance customer preferences and the cultural preservation of the craft (Linton, 2019).

In summary, handmade Sawantwadi wooden toys represent how art, craft, and culture represent our heritage and traditions of the Konkan region. At the same time, bringing innovation and new ideas is important to keep this craft alive and growing in today's market.

## Review of Literature

There is a lot of previous research that examine arts and crafts as well as issues examining the employment of indigenous arts and crafts traditions for the contemporary World: However, those examining opportunities for innovation are rare. Most research (for example Yadav et al., 2022) show that handcrafted products are made through locally sourced materials and manual techniques. They also show that such practices are sustainable. According to Das and Das (2019), these crafts encompass local market, skills, education, technology, and product design. Moreover, Smagina and Ludviga (2020) add that the craft industry creates cultural, educational, aesthetic, economic, symbolic, environmental, social, and developmental qualities that benefit the growth of tourism.

Nath (2024) draws attention to the fact that craft businesses are part of the cottage industry. India is one of the young countries, as the country's maximum population is under twenty-five, and it has one of the prominent handcrafted toy segments. However, very few scholarly articles on traditional handcrafted toys are available (Nath, 2024). Nevertheless, Jayan (2018) says that even with the ecological benefits, handcrafted toys are lagging; 60% of the imported toys from countries such as China and Taiwan are sold through a structured market. Because of that, more than 40% of toy businesses are shut down, and 20% are on the verge of closing (Yadav, 2020).

According to Bhat and Yadav (2016) and Rangaswamy et al. (2018), as the traditional making process of toys is time-consuming and due to the availability of raw materials, this sector cannot fulfill the market requirements. In fact, customer requirements also, change day by day. Moreover, Chawla and Mehta (2020) add that children are getting attracted towards the trending characters and colors with mechanical things. However, handcrafted wooden toys available on the market are limited in options and colors. Therefore, children are not attracted to these toys (Gumulya and Gunawan, 2023). Many customers also prefer affordable toys such as mass-produced PVC toys (Rangaswamy et al., 2018). However, Handmade toys are unique; mass-produced toys made by machines cannot match the authenticity produced by an artist using age-old techniques (Chaudhary et al., 2022).

Along with the customer preferences, there are certain challenges related to operational and functional activities, such as a lack of raw materials, material prices, a lack of conservation of genetic resources, and gender exploitation by traders, faced by the Indian traditional wooden toy-making industry that creates weaknesses (Rangaswamy et al., 2018). However, the uniqueness of objects, aesthetics, and functional qualities is the strength of Indian handicrafts (Gaikwad and Shiware, 2013). Similar concerns have been raised by Faisal (2016) for the Varanasi craft cluster, where artisans face financial challenges and are currently struggling to satisfy the customer needs. These craft sectors are important as they employ people in rural areas. According to Jha (2016), he experimented with Soapstone carved product craft, where he innovated new product applications and designs in collaboration with the artisans. Similarly, by addressing current operational and functional challenges, Sawantwadi toys can achieve sustainable growth and preserve their cultural heritage (Suksikarn and Suksikarn, 2024; Yunyue and Sikka, 2024). Hence, further study is important to explore innovation and market expansion opportunities by identifying strengths and weaknesses.

## Research Method

This study is based on a case study conducted within the qualitative research paradigm, where data were collected through primary and secondary research. Primary data was collected through semi-structured interviews with artisans and shopkeepers of Sawantwadi toys, and

secondary data was collected through existing literature, articles, webpages, newsletters, reports and government institutions. Interviews were conducted in the field at Sawantwadi town. Interview protocols were followed where questions were guided by the following.

- 1) Opening phase: Researcher communicates the purpose of the interview and establish trust regarding confidentiality and ethics. Here, the researcher explains the purpose of the research (Kolb, 2008).
- 2) Questioning phase: Researcher uses predetermined questions,
- 3) Probing phase: Researcher uses follow-up questions based on earlier responses,
- 4) Closing phase: The researcher thanks the respondents and answers the participant's questions (Kolb, 2008).

These interviews were conducted without judgment and with an open mind (Shao, 2002). All interviews were conducted in the local language i.e. Marathi and were recorded. For recording the interviews, the inbuilt recorder available in an android phone was used. Further, Microsoft 360 was used to transcribe and translate all the interviews into English. Ten artisans and craft retailers from Sawantwadi voluntarily participated in the study. The snowball sampling method was followed, and local artisans helped reach out to other artisans.

Consent was obtained before conducting the interviews. The respondents were notified as follows.

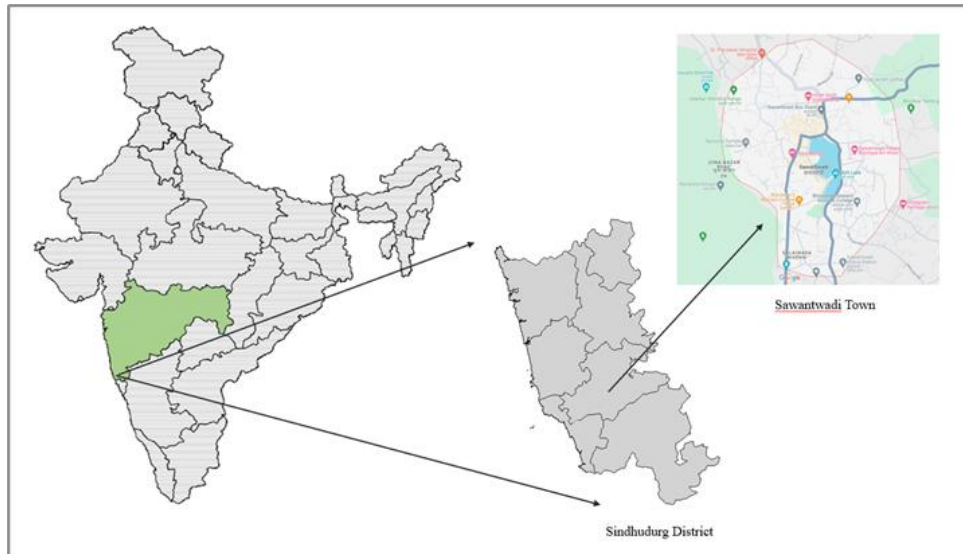
- 1) Participation in the research is voluntary and identity will not be disclosed;
- 2) It is possible to withdraw at any time, and
- 3) It is possible to decline to answer any question (Khaneja, 2020).

A SWOT analysis, a strategic management methodology, was performed using insights from primary and secondary data, to identify gray areas and develop appropriate strategic action plans (Kumar et al., 2023).

### **Research Setting**

This research is conducted in a contextual and socio-cultural setting of Sawantwadi wooden toys. Sawantwadi town is located in the District Sindhudurg, State Maharashtra, India, and is renowned for its intricate wooden toys and ganjifa (Rawat, 2014; Baral et al., 2016; Mangaonkar-Vaiude and Joshi, 2021; Prabhudesai, 2021; Chandrashekhar, 2024). This town has a rich history of traditional craftsmanship, and many generations have passed down their techniques rooted in local culture, motifs and resource use. The setting is especially appropriate for a design research study because it combines historic knowledge, diminishing artisan techniques and increasing market challenges.

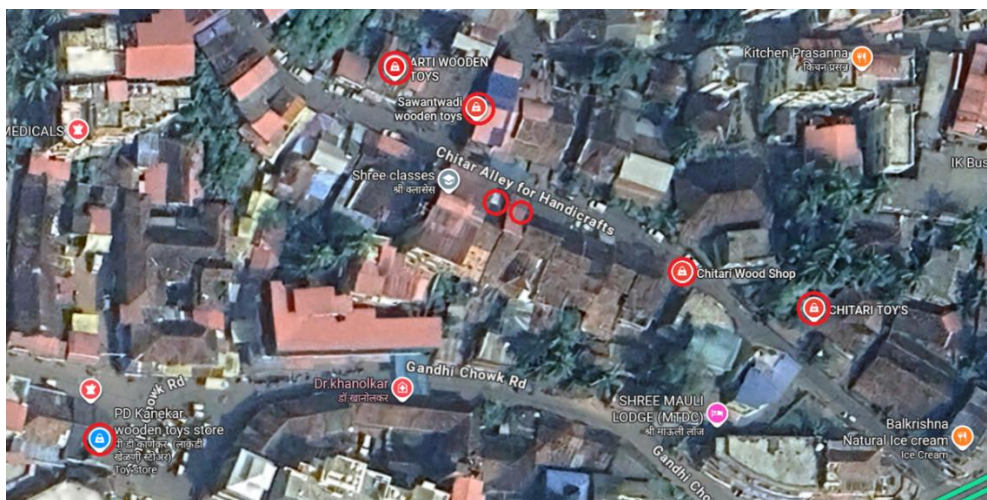
In fact, Sawantwadi is a microcosm of India's larger craft economy, stuck between legacy preservation and the necessity for modernization to match current customer needs and market trends. Selection of Sawantwadi allows for visiting and interacting with the artisans and stakeholders to understand the ground reality and craft-based eco-system.



**Fig 3:** Location of Sawantwadi wooden toys  
Source: Author



**Fig 4:** Shops of wooden toys at Chitar aali, Sawantwadi  
Source: Author



**Fig 5:** Wooden toy shops location at Chitar aali, Sawantwadi (Highlighted in red circle)  
Source: Author

## Findings

Data collected through interviews were analyzed using Excel, and discussions were created based on the opinions and views shared by the artisans. Data that could be cited to provide evidence for aspects identified were noted, while aspects that could be employed for a SWOT analysis were recorded in a table.

It was discovered that Sawantwadi wooden toys are traditionally made by using knowledge transmitted through generations orally and genetically. According to the interview responses, for three to four generations, the Chitrari community has been involved with Sawantwadi wooden toys. In fact, they have been there throughout the development of wooden toys over the past century. According to Bhat and Yadav (2016), Khan (2018), Rangaswamy et al. (2018) and Das and Das (2019), this development is influenced by a variety of factors, as follows.

- a. availability of materials,
- b. production methods,
- c. labor pools,
- d. consumer demands,
- e. the variety of toys available,
- f. government regulation of emerging applications, and
- g. advancing technology.

Taking into consideration of the SWOT analysis, the conversation themes were combined as delineated below.

## Customer Preference

This is one of the main aspects that have significantly contributed to the development and evolution of toy making. While sharing the opinions, the artisans have highlighted the changes in customer preferences and demands. One of the interviewees shared the evolution that they have seen as follows.

"Over the past 30 to 40 years, a variety of products have undergone changes. Products of new varieties were introduced. We made an effort to alter the design in accordance with the demands and needs of the client.

Interviewee 1, Toys retailer

This was confirmed also by another artisan, who she shared an example as follows,

"Previously we were creating limited varieties like replicas of jeeps, buses etc now kinds want toys with mechanisms. Like trucks, mixers, railways etc. we create stencils and make our own toys.

Interviewee 2, Artisan

## Availability of Materials

Nevertheless, it was revealed that the artisans face issues such as lack of materials, availability of skilled labor and competitions from mass produced toys (Prabhudesai, 2021). Sawantwadi toys are made using locally available materials such as Pangira wood and jackfruit. However, some depend on the local Dhangar community, which collects and supplies the material from the jungle and supplies it. This supply is inconsistent, and for material, they need to invest more and store it for a longer time, as one respondent revealed.

"Basically, Wood is not available, we need to wait for 2\_3 yrs for material. Even we need to store it for longer and invest more for that."

Interviewee 3, Artisan



While explaining the problem with the material, they share the characteristics of their material since that material is lightweight and more durable. According to Madar et al. (2012), it is one of the eco-friendly options that create open-ended games for kids, which helps to improve their imagination and creativity.

The durability of Sawantwadi toys has been compared with exported toys, as one of the artisans, revealed

“Toys exported are attractive but not durable, those can break easily. They use very low-quality material. But toys made in Sawantwadi are more durable. Toys used by me are currently my son is using. We tried to make similar toys to compete with exported toys but the cost of exported toys is less. So, market conditions are mix. Customer preference is 50-50. Even Sawantwadi made toys are costly.”

Interviewee 4, Artisan

### **Production Method**

While discussing the operational activities, artisans highlighted the production process they followed. While creating the toys, they prefer to use hand tools made by them.

“Most of our tools are made by us. We design them according to our work, because the readymade tools do not always suit our needs. This way, we adjust and continue making. These self-made toys adapt to our needs while crafting toys.”

Interviewee 5, Artisan and toys retailer

The process of toy-making remains largely handmade, but artisans have adapted their coloring and finishing methods in response to rising costs. Traditionally, natural materials were used to create nontoxic colors, but increasing expenses have made this practice less feasible. One participant explained,

“Techniques for coloring and finishing were changed; we were creating nontoxic colors by using natural materials like yellow color from tamarind, green from coriander, and white color from lime, but the prices of laq have increased, so we cannot bear to make natural colors with a lack. So, we use nontoxic colors that are available on the market. We get thousands of colors in the market.”

Interviewee 2, Artisan

### **Working Capacity**

While understanding working capacity, it is crucial to consider the number of workshops that actively producing wooden toys. Only a limited number of workshops are engaged in toy-making, so these workshops are available for sale in the local market (Jain, 2017). Highlighting this concern, one participant shared,

“There are very few ... (pause) ..only five workshops creating wooden toys, our Chitar aali market is cooperative, you will get toys made from all workshops in all shops. Also, we purchase few from outside like Chanapatana or mass-produced.”

Interviewee 6, Artisan and toys retailer

Due to limited production, these workshops are not able to fulfill the market needs. Another artisan added to this the idea of working capacity as follows,

“Demand is increasing Even we increased the production like first we were creating five toys per day but by taking help of machines such as CNC routing we tried to make it 100 per day. Last year we created around 15000-16000 toys in our workshops, but we are not able to fulfill the market needs. Even we need to compete with exported toy from China which are available in low cost.”

Interviewee 7, Artisan and toys retailer.

### Availability of Workforce

Since the demand for products is very high, they need to get skilled labor to work in workshops, and due to the financial crises, they cannot pay them well either. While explaining the same, one of the interviewees compared the labor charges with farming,

“If worker went and work in farm, they get approx. 500 INR for male and 300 INR for female. But we cannot afford to pay that because our work is seasonal. People are not able to understand our conditions.”

Interviewee 8, Artisan

With continuation of the financial condition mentioned by the artisan for the payment of daily wages, one artisan highlighted the availability of the workforce by stating,

“Actually, laborers come only after the Ganesh festival, when winter starts and farming is completed. They prefer other work, like farming or daily wages, for the rest of the year. Because of this, it is not easy to maintain a regular workforce.”

Interviewee 9, Artisan

### Market Visibility

It was noted that due to low and inconsistent income, workforce availability becomes a crucial problem for the toy-making business. This again affects the production rate and cost of the toys. Packaging, branding, and marketing also need to be more streamlined, which affects the business. Many brands sell wooden toys in various cities, but the cost of those products is very high. Artisans were selling their toys through third parties in various cities, but they were not getting identity; even Artisans tried to sell toys through online selling apps and social media,

“We tried to sell toys through Facebook and online platform such as Konkan sewa manch, also sent in various shops and brands from other cities but they don’t provide any recognition to Sawantwadi artisans also finishing and packaging required for those toys are more which again increases the cost of toys.”

Interviewee 5, Artisan and toys retailer

Here, the artisans are dependent on third-party persons to sell and increase demand in the market, which might affect the identity of the indigenous toys industry from Sawantwadi.

“If we keep making only traditional toys, our sales remains within the local market. But nowadays, customers now want new designs, so innovation is important. But just making new products is not enough people need to know about us. Awareness through exhibitions, social media, and government programs is necessary. With better visibility, we can reach bigger markets and grow our craft”

Interviewee 10, Artisan and toys retailer

For collaboration, all artisans need to come together and work unitedly. Currently, all workshops create toys separately, and no syndicate or cluster of these crafts exists. A few of those artisans are thinking of collaboration, while sharing these feelings of the cluster, one of the enthusiastic artisans has shared the reality.

“Right now, everyone is working separately. If we collaborate and work together, it will be easier to develop the craft, share resources, and reach bigger markets. Without unity, progress is slow.”

Interviewee 4, Artisan

Further, A SWOT analyses is made for further discussion, considering the data collected through primary and secondary sources. SWOT Analysis is a strategic framework that examines an entity's Strengths, Weaknesses, Opportunities, and Threats, providing a structured approach to understanding internal capabilities and external influences. This method aids in strategic planning and decision-making (Lee, 2023).

**Table 2.** SWOT analysis of Sawantwadi wooden toys

Source: Author

SWOT	SWOT variables	Description
<b>Strength</b>	Cultural importance	Indigenous and traditional
	Craftsmen	Working from last 4 generations
	Environment	Eco-friendly
	Uses of toys	Safe to use, durable (Long lasting)
<b>Weakness</b>	Raw material	Inconsistent and dependent on environmental conditions
	Marketing	No marketing awareness
	Product range	Limited product range
	Cluster	Not formed yet
	Skills	Lack of advance skills and tools
	Skilled labor	Unavailability of skilled labors, Many times available in summers only
	Financial sources	Lack of financial resources
<b>Opportunity</b>	Market	Huge market potential
	Awareness and Promotion	Through social media, e-commerce websites, exhibitions in various cities
	Product innovation	Vaste innovation possibility since customers are interested in purchase
	Support	Support from government and NGO's
	Material	Explore alternate materials
	Safer alternative	For existing toys made by using plastic
<b>Threats</b>	Competition	From toys explored from countries like china, UK, Taiwan etc, Mass produced toys
	Interest	Artisans are losing interest
	Government policies	No awareness about policies
	Price range	Material prices and labor prices are increasing
	Identity	Loosing identity due to big brands

The research revealed that development of entrepreneurial skills is essential for the development of local community and the nation. As Kumar et al. (2023) points out, empowerment for handicrafts is an effective tool for economic growth and eliminating unemployment in rural areas. However, it was observed that there are problems due to inadequate finances, workforce availability, and subsequent resources. An appropriate

framework is needed to develop and provide finance, infrastructure, technology, and design support to the artisans from Sawantwadi. Based on the SWOT analysis, suggestions are made as follows:

1. Unite all craftsmen to generate cluster and develop suitable infrastructure
2. Increase toys tourism
3. Generate awareness and provide information about financial and non-financial assistance, as well as existing policies
4. Integration of emerging technology
5. Conduct design thinking workshops, skill development programs for artisans
6. Encourage to ideate new toys which can tap new market
7. Ensure that the cultural and commercial worth of wooden toys are properly balanced
8. Diversification of toys range through innovation
9. Promotion through social network, e-commerce websites and exhibitions
10. Generate systematic channels for raw materials and procure tools

Since Sawantwadi toy industry is not well organized, it's very difficult to resolve all the problems together. However, suitable interventions may help to preserve the indigenous skills and sustain the toys market.

## Conclusion

This research reveals that Sawantwadi wooden toys have significant potential for the economic development of the Konkan region of Maharashtra in India and offer a safer and more durable alternative to plastic toys. The study highlights that Sawantwadi wooden toys hold significant cultural and traditional values, representing traditional skilled craftsmanship and a unique heritage value. The SWOT analysis shows that while the craft benefits from craftsmanship, authenticity, eco-friendly toys, and strong cultural roots, it is constrained by a limited product range, marketing awareness, technological adoption, finance, and competition from mass-produced alternatives. However, opportunities are emerging, such as eco-friendly preferences by customers and growing demand for handmade products, which create scope for innovation and will help market expansion.

At the same time, preservation of such wooden toys depends on addressing the threats, such as the identity of the craft, competition from mass-produced toys, and awareness about government initiatives for artisans. Overall, the study suggests collaboration between designers, policymakers, and artisans for innovation to generate a diversified toy range per customer preference without losing cultural authenticity, and then tap new market segments by promoting crafts through digital media and exhibitions. Moreover, craft stakeholders such as artisans, policymakers, and retailers need to put significant effort into increasing the market visibility through design innovation, infrastructure development, financial support, and awareness. Collaboration between all the stakeholders is crucial to strengthen the future of Sawantwadi wooden toys.

As with any research, this study has certain limitations. The study focused on Sawantwadi wooden toys, studies applied in other countries, and other crafts; the results may vary. Thus, future studies can be undertaken in different domains of crafts to develop further knowledge.

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### Declaration of Human Ethics and Consent to Participate

The research was conducted as per institutional and national ethical standards. All participants were informed about the study, and each participant provided informed consent before participating.

**Conflict of Interest:** All the authors declare that they have no conflicts of interest.

**Clinical Trial Registration:** This study is not a clinical trial and, thus, does not require registration.

### References

- Ameyaw, H.O. & Ademtsu, J.T. (2024) 'Arts in Modern Ghanaian Festival: Kwahu Easter in context,' *International Journal for Multidisciplinary Research*, 6(1), 34-56  
<https://doi.org/10.36948/ijfmr.2024.v06i01.11619>.
- Bairagi, N. & Selvadhas, A. (2023) 'Design Knowledge in Practice: An Ethnographic Study with Santhal and Mohli Tribal Artisans of Dumka, India,' in Smart innovation, systems and technologies, 149–161. [https://doi.org/10.1007/978-981-99-0264-4\\_13](https://doi.org/10.1007/978-981-99-0264-4_13).
- Baral, B. S., Divyadarshan. C. & Lija. M. G (2016). D'Source Design Resource on Wooden Toys - Sawantwadi. <https://www.dsource.in/resource/wooden-toys-sawantwadi>.
- Bhat, J.A. & Yadav, P. (2016) 'The Sector of Handicrafts and its Share in Indian Economy,' *Arabian Journal of Business and Management Review*, 6(6), 1–6.  
<https://doi.org/10.4172/2223-5833.s3-009>.
- Chandrashekar, M. (2024, January 30). The Enchanting World of Maharashtra's Sawantwadi Wooden Toys. The Cultural Heritage of India.  
<https://cultureandheritage.org/2024/01/sawantwadi-wooden-toys-of-maharashtra.html>
- Chaudhary, M., Agarwal, B. & Bhatia, M. (2022) 'Geographical indications in India: A case of Handicraft industry in Uttar Pradesh,' *The Journal of World Intellectual Property*, 25(3), 617–634. <https://doi.org/10.1111/jwip.12244>.
- Chavan, C. Y. & Chandar, S. (2022) The Relationships Between Socio-Economic, Political and Cultural Profiles of the People and House-Forms: Sawantwadi, Maharashtra, India During the British era. ISVS e-journal, 9(3), 139-154
- Chawla, N. & Mehta, R. (2020). Children's Influence on Parent's Purchasing Decision in Toy Industry. *Pacific Business Review International*, 13(3), 127–137.
- Das, M. & Das, A. (2019) 'Craft Education in Design,' *DS 95: Proceedings of the 21st International Conference on Engineering and Product Design Education (E&PDE 2019)*, University of Strathclyde, Glasgow. 12th -13th September 2019 [Preprint].  
<https://doi.org/10.35199/epde2019.23>.
- Faisal, S. (2016) 'Wooden Toys of Varanasi weakly developed the isolated sector and shortages of income and employment opportunities,' *Arts and Social Sciences Journal*, 7(3)67-78 <https://doi.org/10.4172/2151-6200.1000195>.
- Gaikwad, S.P. and Shiware, T.A., 2013. Trends of Indian handicraft export since 2001. *Global Management Review*, 7(3), 38-61
- Gumulya, D. & Gunawan, C. (2023) 'Designing colorful sustainable toys for Babies: A Sustainable Design approach,' *International Journal of Design & Nature and Ecodynamics*, 18(3), 593–603. <https://doi.org/10.18280/ijdne.180311>.
- Gupte, B. A. (1889) भारतीय हस्तकला स्वरूप व इतिहास (Form and History of Indian Crafts) (H. A. Bhawe, Ed.). Pune India: Varada Books.
- Ikei, H., Song, C. & Miyazaki, Y. (2017) Physiological effects of wood on humans: a review. *Journal of Wood Science*, 63(1), 1–23. <https://doi.org/10.1007/s10086-016-1597-9>
- Jadhav, R. (2020, August 21). Maharashtra's wooden toy hub gasps for survival. The Hindu Businessline. <https://www.thehindubusinessline.com/news/maharashtras-wooden-toy-hub-gasps-for-survival/article32486762.ece>
- Jain, S. (2017, November 17). An Award-Winning Craftsman and the Long Legacy of Wooden Toys on His Shoulders. The Better India.

- <https://www.thebetterindia.com/122140/wooden-toys-sawantwadi-rural-art-maharashtra-crafts-tradition/>
- Jayan, A. P. (2018) A theoretical paper on research studies about conventional toy industry. *Research Journal of Management*, 7(2), 6–9.
- Jha, S.K. (2017) 'Craft study and product design interventions: Soapstone Craft Cluster of Dhakotha area in Kendujhar District of Odisha, India,' *The Chitrolekha Journal on Art and Design*, 1(1), 45-65 <https://doi.org/10.21659/cjad.v1n1.v1n103>.
- Khan, F. (2018) A Descriptive Study to Assess the Knowledge and Attitude regarding the Play Needs of Toddlers among Parents in a Selected Hospital of New Delhi. *International Journal of Nursing and Midwifery Research*, 5(2), 15–19. <https://doi.org/10.24321/2455.9318.201816>
- Khan, W.A., Research Scholar and Amir, Z., Dean (2013) *Study of Handicraft Marketing Strategies of Artisans in Uttar Pradesh and its implications*, *Research Journal of Management Sciences*, 2(2), 23–26. <https://isca.me/IJMS/Archive/v2/i2/5.ISCA-RJMS-2012-057.pdf>.
- Khaneja, S. (2020) Understanding the influence of physical environment design on emotional well-being and its effect on consumers' perception towards brand performance: A study in the context of a retail setting in the United Kingdom [Middlesex University]. <https://repository.mdx.ac.uk/item/895q4>
- Kolb, B. (2008) *Marketing Research*. : SAGE Publications Ltd. Available at: <https://doi.org/10.4135/9780857028013>.
- Kumar, P., Madaan, S. & Bhargava, G. (2023) 'An insight about Bell Metal Craft—Scopes of improvement and promotion,' in *Smart innovation, systems and technologies*, pp. 965–975. [https://doi.org/10.1007/978-981-99-0264-4\\_79](https://doi.org/10.1007/978-981-99-0264-4_79).
- Linton, C. (2019) "Making It For Our Country": An Ethnography of Mud-Dyeing on Amami Ōshima Island. *TEXTILE*, 18(3), 250–277. <https://doi.org/10.1080/14759756.2019.1690837>
- MacEachren, Z. (2004) Function and Aesthetics: Defining Craftsmanship. *Journal of Experiential Education*, 26(3), 138–151. <https://doi.org/10.1177/105382590402600305>
- Madar, A., Boşcor, D., Băltescu, C. & Neacşu, A. (2012) Wooden versus plastic toys. *Proceedings of the International Scientific Conference Eco-Trend*, 254–260.
- Mangaonkar-Vaiude, P. & Joshi, M. (2021). Study and Revival Strategies for Traditional Art Form: Case of Sindhudurg (819–831) [https://doi.org/10.1007/978-981-16-0041-8\\_67](https://doi.org/10.1007/978-981-16-0041-8_67)
- Nath, S. (2024) Virtuous spaces, virtual places: institutionalizing values on ethical consumerism in the Indian toy industry through field-configuring events. *Future Business Journal*, 10(1), 125. <https://doi.org/10.1186/s43093-024-00414-5>
- Prabhudesai, A. K. (2021) A Theoretical Study on Wooden Toy Industry-Case Study of Sawantwadi, Sindhudurga District, Maharashtra. *AMIERJ*, 10(3), 191–197. <https://zenodo.org/record/6950221>
- Preserving Artistic Tradition. (2022). Sawantwadi Palace Boutique Art Hotel. <https://www.sawantwadipalace.com/arts>
- Rangaswamy, J., Kumar, T. & Bhalla, K. (2018) A Comprehensive Life-Cycle Assessment of Locally Oriented Small-Scale Toy Industries: A Study of traditional Channapatna Toys as Against Low-cost PVC (Poly-Vinyl Chloride) Toys Made in China. *Procedia CIRP*, 69, 487–492. <https://doi.org/10.1016/j.procir.2017.12.164>
- Ranjan, M. P. & Ranjan, A. (2007) National Institute of Design, and Office of the Development Commissioner Council of Handicraft Development Corporations (New Delhi, I. Handmade in India. Council of Handicraft Development Corporations. <https://books.google.co.in/books?id=An8GvAEACAAJ>
- Rawat, R. (2014) Semiotic study of wooden craft of Sawantwadi [NIFT]. <http://14.139.111.20:7888/jspui/handle/1/55>
- Shao, A. T. (2002) *Marketing Research: An Aid to Decision Making*. In South-Western/Thomson Learning, 2002. South-Western/Thomson Learning, 2002.
- Smagina, A. & Ludviga, I. (2020). Craft Entrepreneurship and Created Value. *Proceedings of*

- the International Scientific Conference Rural Environment, Education and Personality (REEP), 366–378. <https://doi.org/10.22616/REEP.2020.044>
- Suksikarn, R. & Suksikarn, J. (2024) 'Craft-Design Collaboration: Designing and Developing Products from Banana Fibers through Community Participation,' *Archives of Design Research*, 37(5), 197–218. <https://doi.org/10.15187/adr.2024.11.37.5.197>.
- Walker, S., Evans, M. & Mullagh, L. (2019). Meaningful practices: The contemporary relevance of traditional making for sustainable material futures. *Craft Research*.
- Yadav, C. S. (2020) Incredible" Handmade in india" toys on the brink of extinction. *International Journal of Disaster Recovery and Business Continuity*, 11(1), 561–571. <http://210.212.169.38/xmlui/bitstream/handle/123456789/9651/Incredible%20%20handmade%20in%20india%20toys%20on%20the%20brink%20of%20extinction.pdf?sequence=1&ndisAllowed=y>
- Yadav, U. S., Tripathi, R., Yadav, G. P. & Tripathi, M. A. (2022) Proposal of a Global Handicraft Index for Sustainable Development: A Visionary Approach for Small Industry and Developing Strategies for Handicraft (Rural Industry). *European Journal of Sustainable Development Research*, 6(2), em0185. <https://doi.org/10.21601/ejosdr/11909>
- Yunyue, L. & Sikka, S. (2024) 'Endogenous development and creative bamboo handicraft product design in Yibin, China,' *The International Journal of Design in Society*, 18(2), pp. 151–174. <https://doi.org/10.18848/2325-1328/cgp/v18i02/151-174>.