

Understanding the Reasons for Failure and Probable Solutions of Allahabad Moonjkari Works (local handicraft using waste green material): A Study in Sustainable Social Entrepreneurship

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Abstract- Allahabad Moonjkari Works was established in 2016 by Dr. Saumya Bahadur in Prayagraj under the Blossoms Goonj Society as an experiment in sustainable social entrepreneurship. The project sought to revive and promote moonj craft—an indigenous, eco-friendly art form made from wild moonj grass that grows naturally along the banks of the Yamuna River. This grass possesses unique fibrous and water-resistant properties, making it ideal for creating durable, biodegradable household items. The initiative aimed to empower uneducated and unemployed rural men and women by providing them with training and employment, thereby addressing both environmental and social concerns. However, despite its strong conceptual foundation in sustainability and ethical employment generation, the model faced multiple challenges in execution. The enterprise struggled to maintain economic viability due to high transportation costs, limited access to international niche markets, and the use of non-eco-friendly chemical dyes that undermined its environmental goals. Furthermore, ensuring fair wages for artisans while keeping product prices competitive proved unsustainable within the existing market framework. This paper critically analyses the reasons behind the failure of Allahabad Moonjkari Works through the lens of the three pillars of sustainability—environmental, social, and economic—and identifies the systemic issues that led to its collapse. By applying creative problem-solving and sustainability frameworks, it proposes innovative and practical solutions to overcome these barriers, including process automation, eco-friendly dye innovation, cooperative-based ownership models, and strategic partnerships with wholesalers. The study concludes by presenting a universal conceptual model derived from the Moonjkari experience—a replicable structure that integrates ethical production, environmental responsibility, and financial feasibility. This model aims to serve as a guiding framework for future social enterprises seeking to transform local crafts and natural materials into sustainable economic opportunities.

I. INTRODUCTION

Allahabad moonjkari works was established in 2016 by Dr Saumya Bahadur in Prayagraj registered through Blossoms Goonj society Allahabad. It was a social entrepreneurship model built with the intention of promoting moonj works. Moonj is an art form specially designed with moonj grass in Allahabad , a grass grown at banks of river Yamuna. The grass has various natural properties which cause it to have a fibrous structure stable for modeling and is water resistant. The research was carried out in Naini municipality of Allahabad by Sam Higginbothom in order to generate avenues for employment for local people who were unemployed and uneducated in 1960s initially. The designs and study of designs were carried out by the institute and were at par with Moroccan baskets. The beautiful designs came in various colours. Dr Saumya Bahadur tried to replicate the model and sell it internationally.

The basket sold at the local market didn't get much price because it was locally available and seen as a substitute of the plastic baskets when the difference is in aesthetic value and ecofriendly nature, but it had a potential in niche markets as it's seen as an aesthetic object not as a utility one. The Baskets have the natural property of circulation of air which keeps food fresh for longer chapatis and fruits. In terms of the natural property the baskets are sustainable and ecofriendly as its a concept of using a waste product to make something of utility and high value with human labour and intelligence as making patterns require a lot of intelligence.

The business model was carried out on the basis of the idea of sustainability, sustainability in terms of being ecofriendly and a sustainable method of generation of employment of the uneducated population. The baskets were studied and sold on online platforms such as Etsy. The price of baskets were kept high with the aim of getting sustainable profit. The baskets were sold at various exhibitions locally. The basket started selling at Etsy and payments were made but the cost of international transport was very high as the weight was less and the transport cost was high. International transportation cost more than the cost of a basket and the model was not sustainable and ethical. It could have worked for a short time but it needed to be sustainable to work for a long time.

Now here we analyse sustainability, the concept of sustainability comes the understanding

Component	Definition	Relevance to Moonjkari Works
Environmental	Conservation of natural resources and reduction of pollution	Use of natural grass was eco-friendly, but chemical dyes with lead compounds made the product environmentally unsafe
Social	Fair labour practices and community upliftment	Rural women were employed, but lack of fair wages and education reduced ethical sustainability
Economic	Financial viability and equitable profit	High costs of transport and labour made the project economically unsustainable

- Environmental: Conserving natural resources, protecting ecosystems, reducing pollution, and combating climate change.
- Social: Ensuring fair labor practices, promoting diversity and inclusion, providing good working conditions, and supporting local communities.
- Economic: Maintaining long-term financial viability without depleting natural resources, through efficient production, and responsible business practices.

Environmentally the model was failing because though the colours used to dye the basket were not environment friendly they were based on lead compound and could not be used because the concept of sustainability should not harm the environment in long run. The grass is ecofriendly not just because of

Sustainability is the practice of meeting present needs without compromising the ability of future generations to meet their own needs. It involves balancing environmental protection, social equity, and economic viability to ensure the long-term health of the planet and its inhabitants. Key practices include using renewable energy, reducing waste, and ensuring fair labor conditions.

Key components of sustainability

According to the Brundtland Commission (1987), sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” It rests on three interdependent pillars:

its fibers but also because it also cleans up the water by absorbing heavy metals from the water causing it to have vibrant dark colours. The heavy metals including chromium and cobalt are absorbed from water and the water is cleaned. So while it passed on many parameters of sustainability in terms of ecology it is failing when the colours used are not environment friendly. If we remove colours it will become less pleasing and designs can only be changed in physical nature in terms of patterns.

If we see sustainability in terms of Social then we understand the time required to make each basket was around three days, it was being made by women who were mostly uneducated and unemployed also men and women who were working in agriculture farms. In terms of fair labour practices it was not ethical, first of

all they should have fair compensation and next there should be no problem of unemployment of uneducated women. The women should get an education that should be a priority not to gain profit from the basket or the model, but the model can be studied to understand all the models of sustainability using natural products to make high end products. The problem can be understood as a universal concept.

The third parameter is how to make it economical, if the model is economic in its current form it can be economical only when the labours are not paid fair, so once the labour is paid fair price we understand the model cannot be stable because the baskets will cost more. It will only be economical if we make sustainable profit which can help the future operations, we can grow the model only when we are able to hire qualified managers to manage operations so I should be able to generate profit in that terms. So we have to reach a place where there is sustainable price keeping in mind all these factors.

Problems in actual execution of the idea

The baskets caused more if the wages were paid ethically which caused the model to fail, the labour should get fair prices for their labour otherwise its exploitation not sustainability. And the problem roots from uneducation so the people should be educated since it was an NGO project the objective was upliftment of society and business was built with a purpose of helping and upliftment of the society and not make a model of sustainability.

The difference between a business model and model of sustainability is that the objective of business is to earn profit whereas the objective of sustainability is upliftment of society. So it can be built as a business model but it has to be disintegrated in ideation stage to its purpose to be built after gaining understanding to make it a sustainable model with a purpose to help the society.

It can be looked as a problem or as an opportunity, as a problem we understand that uneducation of rural women was a problem so if we see it as a problem we have to educate rural women so that their working hours are compensated ethically, if we see as an

opportunity then it can be converted into a model of sustainability to convert a low cost environment friendly product which assimilates heavy metals and cleans the water of ganges and produces high end products with ethical compensation of the labour forces.

Understanding the probable ideas which can be used to synthesise a model which is sustainable in terms of our understanding of sustainability and integrate them and understand if they by working together can make a sustainable model. To understand this concept we took the help of a creative problem solving model, once we identified the problem on the basis of properties of three components , environmental , social and economical.

Now the problems can be understood and analysed the broad problems that came out are,

1. If ethical prices are paid the price of the basket becomes very high and the business model becomes non profitable.
2. The material used for dyes was not environment friendly
3. It has a demand in the international market but reaching there is not financially sustainable in the retail model as transportation cost is very high.
4. Market accessibility, we were not able to reach the niche market since we had limited financial resources
5. Search for new designs and uses to expand the market, so that we can develop better and more sustainable models.

After using the creative problem solving model we analysed each problem and tried to convert it into opportunity.

Need for this model to work, We see the basket as a concept, the basket is fluid for us, basket is the study of an idea which can be produced as a model then a concept and then a phenomenon which is universal and can be used for all the ideas, *ideas is to use an environment friendly product which is a waste or solving another environmental problem(waste) , using manual labour which is causing another social problem (unemployment) and turning it into a high*

end product which will cause an economical problem (income).

Idea → Model → Concept → Phenomenon

Idea: .

A plan, thought or suggestion, especially about what to do in a particular situation

Model ;

A copy of something that is usually smaller than the real thing

Concept:

Abstract notion that represents a thing, a group of things, or a relationship.

Phenomenon:

A phenomenon that is universal in nature is an event or principle that occurs consistently and applies everywhere in the universe, regardless of location or circumstance.

Conceptual Framework Derived from the Study

The “Moonjkari Model of Sustainability” can be expressed as a universal framework for eco-social entrepreneurship:

Stage	Description
Idea	Use a natural or waste product to address environmental issues.
Model	Combine manual labour and creativity to transform the waste into a utilitarian product.
Concept	Integrate ethical, social, and ecological dimensions to achieve sustainability.
Phenomenon	Create a replicable, scalable system applicable to other crafts or natural resources.

With the help of the Moonj basket we are studying the model of sustainability, problems and solutions to make it work universally for all such ideas. Products can be created on such ideas which are sustainable in terms of our understanding and definition of sustainability.

Probable solutions of the problems were understood.

Solution for problem No 1. We can use semi automation in the process of making the basket so that the problem of unemployment is solved along with the problem of fair wages. If a woman can make four to five baskets a day she can earn a sustainable income. We need to design tools and equipment which can make the process of making baskets easy and quicker so that the workers can make more baskets in a day.

Solution to problem No 2. The material used to dye the grass is not eco friendly and made with heavy metals which then are processed with use of water creating water pollution, now if we study and experiment with different dyes we can make different dyes which are ecofriendly and do not pollute the water, as the grass is assimilating heavy metals it absorbs from water it also cleans the water.

Solution to problem No 3: The basket is more in demand in international market since it is similar to moroccan baskets which are sold in international market, going to retail market internationally is not economic as transportation cost is very high, the solution analysed is tying up with wholesalers in international market so that we get access to the international market and find suitable suppliers and wholesalers without worrying about the market.

For local niche markets we will have to develop the market by showcasing the product at trade fairs around the country in markets which are unexplored. As the product is high end we will have a niche market of buyers but we need to show the buyers our products which can be done online and offline through the use of social media and internet.

Solution to problem No 4: Market accessibility, if we need to access the market we have to explore various possibilities such as showcasing at emporiums and creating websites and tying up with sellers in local markets so as to improve visibility, we can collaborate

with various online seller websites. For local markets we have to explore people who will not misuse or exploit us so that our model fails or we have to exploit our workers so a better way is to build a cooperative which is run by the people owning it. We can be craftsmen as well as sellers. Something similar to the model of amul.

Solution to problem No 5: We will use engineering and programming for new product development so that we can make new models which are better in designs and patterns, the baskets can also be made in the designs of lampshades to find new uses of the craft to expand the market and uses. Trays and various other products can be made with this product and various new raw materials can be used as we are taking it as a fluid concept so input is a free of cost waste material, it can also be discarded clothes or paddy.

II. DISCUSSION

This study highlights a crucial distinction between business models and sustainability models, a difference often misunderstood in the implementation of social enterprises. While a business model primarily focuses on generating profit, market expansion, and financial returns, a sustainability model is guided by the broader purpose of achieving social equity, environmental stewardship, and long-term economic balance. Profit, in such a framework, is not the ultimate goal but a means to sustain and scale social and ecological well-being.

For a sustainability model to truly endure, it must integrate and harmonize the three interdependent dimensions often referred to as the triple bottom line—people, planet, and profit. This integration requires a shift in perspective from short-term financial gains to long-term systemic value creation. Social sustainability can only be ensured through empowerment—by providing fair wages, education, and skill development to marginalized communities. Environmental sustainability demands responsible sourcing, use of non-toxic materials, and circular design processes that minimize waste. Economic sustainability, on the other hand, depends on innovation, adaptive business strategies, and transparent governance that ensures ethical operations and reinvestment into community development.

Innovation plays a central role in connecting these three dimensions. Through technological adaptation, creative design thinking, and collaborative partnerships, sustainable enterprises can reduce production costs, enhance product value, and create scalable impact. Education is equally essential—it bridges the gap between labour and leadership by enabling artisans and workers to understand their role not merely as producers but as stakeholders in a shared vision. Finally, ethical governance ensures accountability and transparency, fostering trust among consumers, producers, and society at large.

Thus, sustainability cannot be achieved by economic success alone; it requires a conscious transformation of intent and structure within the organization. When innovation, education, and ethics function in harmony, they form the foundation of a model that not only survives market pressures but also contributes to the collective good of humanity and the environment.

CONCLUSION

The Allahabad Moonjkari Works project, though unsuccessful as a business venture, stands as a valuable case study in understanding the complexities of applying sustainability principles within real-world economic and social frameworks. Conceived as a model for eco-friendly production and rural empowerment, it exposed the intricate tensions that exist between environmental responsibility, social welfare, and economic feasibility. Its failure was not merely a commercial setback but a revelation of the structural challenges that accompany the translation of sustainability ideals into practical, market-based operations.

The project highlighted that sustainability cannot thrive in isolation from education, innovation, and systemic support. Rural artisans, especially women from economically marginalized backgrounds, need more than employment—they need access to education, financial literacy, and skill development to become active participants in their own economic upliftment. The lessons from this model suggest that sustainability begins with human capacity building, not just ecological awareness. When communities are equipped with knowledge and decision-making

power, they can transform their crafts into viable, self-sustaining enterprises.

Moreover, the case underscores the need for design thinking and technological adaptation in traditional industries. Integrating semi-automation and research-based innovation can reduce production time, ensure fair wages, and make indigenous crafts globally competitive. Equally important is the creation of ethical market linkages, such as cooperative ownership structures and fair-trade partnerships, which can protect artisans from exploitation and connect them directly to consumers who value sustainable products.

From an environmental perspective, the shift toward eco-friendly dyes and waste-based raw materials can enhance the authenticity of such models, aligning them with global environmental standards. From a social standpoint, community-led enterprises foster inclusion and equity, ensuring that profits are distributed fairly and reinvested into local welfare. Economically, diversification of products and markets can stabilize income and encourage innovation.

The restructured Moonjkari model thus represents more than a revival plan—it offers a universal blueprint for sustainable, craft-based entrepreneurship that balances people, planet, and profit. It demonstrates that sustainability is not an endpoint but an evolving process—one that requires continuous reflection, learning, and adaptation. The insights drawn from this experience can inform future projects across developing economies, where traditional skills, if nurtured with ethical vision and modern innovation, can become powerful agents of both social transformation and environmental regeneration.

REFERENCES

- [1] Rana, Anurag. “Moonj Grass – A Narrative.” *Global InCH – International Journal of Intangible Cultural Heritage*, Issue 42, Summer 2023. This presents details about moonj grass, its harvesting along the Yamuna, and craft applications. Global InCH+1
- [2] “Changeri / Moonj Grass Basket Craft of Haryana.” *Global InCH – International Journal of Intangible Cultural Heritage*. This describes the craft in Haryana (outer layer of sarkanda/moonj, coiling technique, basket types). Global InCH+1
- [3] “Analysing the effect of sustainable entrepreneurship on the family-based moonj craft and pattal (leaf plate) industry in the handicraft sector in India.” *Multidisciplinary Reviews*. This research paper examines how sustainable entrepreneurship affects moonj craft livelihoods (including women artisans, digital technology adoption). Malque
- [4] “The grass is green for the moonj weavers of Allahabad.” *National Herald India*. This article provides an on-ground/descriptive account of moonj craft in Prayagraj (Allahabad) region: harvesting, artisan lives, skill and participation. National Herald
- [5] D’SOURCE. “Moonj Basketry, Allahabad – The craft of Moonj-wild grass products.” (PDF document) This provides detailed introduction, tools and process, product types for moonj craft in Allahabad region. Dsource
- [6] “Moonj ‘bank’ to replenish artisans’ raw-material stocks all year long.” *The Times of India*. This news piece discusses raw material supply issues (moonj grass) and attempts at institutional support in Allahabad. The Times of India