

Brass Products of Pareo: Its Product Domain and Range of Economic Returns

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Abstract

Present paper is designed to understand the genesis in its present form of traditional metal industry of Bihar namely that situated at Pareo located some 40 km west from the capital city of Patna on the banks of river Sone and adjacent to famous bridge across the river Sone.

The paper tries to map out the brass products being manufactured in small units in a traditional setup passed on from generation to generation with history dating back to Ramayana age. Further, the paper analyses economics of production based on a sample of 50 production units in terms of their cost structure and the earnings derived therefrom. The nature of market in terms of its geographical dimension and seasonality has also been explored. An analytical perspective based on the market structure, demand, product, cost and reward tries to answer the present state and progress of the industry with some suggestions on changes required to bring better outcome for the industry in future with policy interventions.

Keywords: Product Domain: Thali, Plate, Gamla, Gagara, Parat etc, Cost of Production, Economic Returns, Resemblance to Perfectly Competitive Market, Limited Product Range, Limited Returns, Traditional Technique of Production, Lack of Modernization

Introduction

Bihar is placed amongst the laggard states in terms of industrial development. The divide in industrial development of the states in the country and to Bihar deepened further with the bifurcation of the state in the year 2000. The majority of the industrial units which formed some reasonable industrial base for the then Bihar moved into folds of new Jharkhand state with Bihar being deindustrialized as outcome of wider political decision. From the year 2000s onwards, Bihar lost an area which provided it with industrial inputs and fuels like coal; a substantial industrial infrastructure and base units like Tisco, Bokaro steel plant, which provides

iron & steel for the country; units like Telco, which produces heavy transportation vehicles sold throughout the country; power units like thermal power name, Damodar Vally Corporation (hydro power) & others. The industrial structure that emerged for Bihar after 2000s was bereft of any large scale public sector industry or any large private industrial production unit of national repute. Compounding the situation further was lack of interest shown by private producers and foreign investor in putting money in Bihar due to lack of infrastructure and poor governance history. No public sector investment of substantial value was ever made as a plan to industrialize high population agriculture dependent economy of Bihar. Till now, Bihar has looked askance at the existing traditional industry which has provided economic sustenance and semblance of industrial structure to the Bihar economy where manufacturing activities are few and requires big push to bring up the economy provide employment and prevent distress management. Pareo brass industry is one such industrial structure which may be strengthened and broadened for industrial development of Bihar.

Review of Literature

Christopher Woodruff (2018) explores how fundamental factors influence a firm's ability to broaden its operational range. Factors include the size of capital, availability of labor, entrepreneurial efficiency, and the role of gender in entrepreneurship play a pivotal role in shaping the trajectory of business growth and diversification highlights a strong correlation between a firm's expansion in range and its rewards. How fundamental factors contribute to firm expansion is only one of the core highlights of this paper.

Tobing et al. (2019) this was a case study about the blacksmith metal industry, pointing out that product branding is very important for the growth and development of small-scale enterprises and ensuring a steady and sustainable demand for their products. In contrast, such people who do not have a brand had less participation in such activity. This fact clearly shows that the branding process plays a crucial role in making the small-scale industries popular, their credibility, and subsequently market presence in the competitive arena.

Malek et al. (2020) state that the introduction of new product helps firms get proportionate reward. Such benefits are associated with market share enhancements, higher sales revenue, greater customer loyalty, and stronger brand recognition. The product range, therefore, expands the business into a wide range of audiences, helps it meet the customers' unmet needs, and keeps it ahead of its competitors.

Chen, Y.-J. (2015) explains that rewards can play a very significant role in the strengthening of businesses and can impact their performance greatly. A well-designed reward system can boost the motivation, engagement, and productivity of employees. Rewards can be intrinsic, such as recognition and growth opportunities, or extrinsic, such as bonuses and incentives, and are used as positive reinforcement to encourage employees to align their efforts with organizational goals.

Wei et al. (2009) explain marketing and human resource management that influence the implementation of market orientation and new product innovation.

Burroughs et al. (2011) state that creativity training, extrinsic rewards, intrinsic motivation, and creative product outcomes are interconnected and mutually influential elements in the creative process.

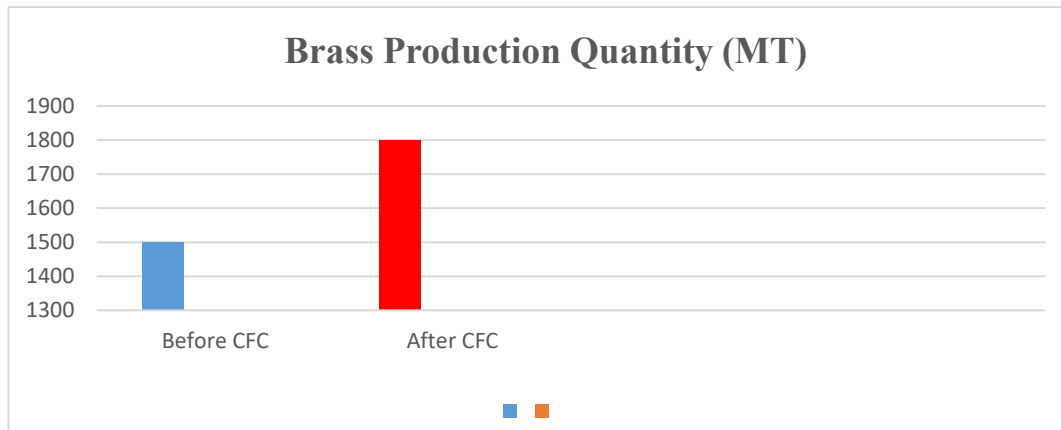
Brass Industries and Its Contribution in Indian Economy

India's Brass Market is experiencing robust growth, driven by rising demand from key sectors, increasing infrastructure development projects, and the growing popularity of decorative brass items. According to a recent study by Blue Weave Consulting, a leading strategic consulting and market research firm, the Indian brass market was valued at USD 526.68 million in 2023. It is projected to grow at a CAGR of 4.60% during the forecast period from 2024 to 2030, reaching an estimated value of USD 711.81 million by 2030. The market's expansion is fueled by demand from the electrical, automotive, and construction industries, thanks to brass's durability, corrosion resistance, and conductivity. Rapid urbanization and a rising number of infrastructure projects further drive demand, particularly in plumbing and fittings. Additionally, growing environmental concerns are boosting the use of recyclable materials like brass, promoting sustainable growth. Export opportunities, supported by India's skilled manufacturing sector, along with increasing consumer preference for stylish and durable home décor products, also play a key role in the market's upward trajectory.

Significance of Pareo Brass Industry in Bihar

D.C. Sahu (2003) published a report, "Diagnostic study report on brass & German silver utensils at Pareo" highlighted the significance of the brass industry at Pareo. This industry has a traditional setup and working with many limitations. The employment contribution of this industry has been remarkable. More than 30,000 people are getting employment directly or indirectly. This is a significant number for this small-scale industry. Since Bihar has been counted in an industry- lagging state, this Pareo brass industry is one of the most promising.

According to the Ministry of Micro, Small & Medium Enterprises (MSME), Government of India, the introduction of the Common Facility Center (CFC) in Pareo in 2016 has played a pivotal role in boosting production within the local metal crafts industry. The CFC was established with the objective of providing artisans and small-scale manufacturers with access to modern tools, advanced machinery, and technical support, which were previously unavailable to individual craftsmen. The production increases from 1500 MT to 1800 MT, which shows the positive change by the introduction of CFC.



Source: Ministry of Micro, Small & Medium Enterprises Government of India (2016).

Importance of Pareo brass industry lies not only in its present production capacity producing certain range of products but in terms of what it can produce given that it is able to exploit the full range of products being produce by similar industry elsewhere in the country.

The product domain is currently limited and does not encompass the broader range of products produced across India. Brass, a key material used in the production of sanitary fittings, holds a significant national market presence — a potential that remains untapped in Pareo. Expanding the product range to include brass-based sanitary fittings and other related items could open doors to wider markets and drive substantial growth. Another important aspect that is- export which is missing from Pareo.

Brass is extensively used in defense industry for production of ammunition. Brass products are widely produced all over the country and marketed as set of related product forming a composite whole such as dinner set decorative items set.

All of these are unfortunately missing from the product range derived since ancient time at Pareo. All of these underline the importance of modernization and expansion of Pareo brass industry to make it more productive remunerative and employment generating enterprise.

The Brass Industry at Pareo

The Pareo village situated on the bank of river Sone near the famous Koilwar bridge has been a traditional hub of brass (German Silver) and bronze (Bell metal) metal wares used for cooking, serving food, storing water and religious activities. Historicity of Pareo dates back to Ramayna age when it is believed that Ram stayed in village overnight on his way to Mithila.

It is estimated that over 90% of the village's population is engaged in the production of brass utensils. The Kasera community in Bihar has long been renowned for crafting brass and German silver kitchenware. Most businesses rely on old brass waste as the primary raw material for manufacturing cutlery. Dealers bring brass

scrap and exchange it for newly crafted kitchenware from the units. Fresh raw materials are sparingly used due to their high cost, which significantly increases the price of the final products, and their limited availability in the local market. While most firms still use traditional manual techniques for production, some are adopting modern equipment, such as rolling machines, power presses, grinders, polishing & buffing machines. The entrepreneurs in this sector possess excellent skills, and the overall production process is well-supported in terms of manpower, machinery, and materials (D.C Sahu 2003).

The current paper is the product of information collected from 50 industrial units situated at Pareo on the basis of a structured questionnaire.

The Brass Products of Pareo

The Pareo metal crafts industry is primarily an industry, which produces brassware products in the nature of kitchen utensils (Thali, Lota, Chota-Parat, Bada-Parat, Bhaguna, Kathwat, Gagara, Handi Kalash etc.). Some products find use in Pooja such as: Diya, Diya stand, Agarbati Stand, Pooja Thali, Achmani, Lotni etc.

This study of the production units carried out through structured questioner built for the purpose revealed certain common features with regard to production carried out by all the units under study. Certain products are perennial in nature and they construct the core of the output of all the units sampled at Pareo. In total 50 units of a total of approximately 200 units situated at Pareo were studied.

Products are seasonal in nature and its production is usually taken up during certain season which coincides with some festive season religious month like Sawan, Diwali, Dusherra, Chaaht etc. Most of the products produced at Pareo follows simple traditional production process based on first creation of brass sheet then giving it requisite shape by pressing or beating up the metal to the requisite shape followed by grinding and polishing.

Structure of Production Units at Pareo

The production unit in Pareo are traditional and small scale in nature. Traditionality of the production unit implies that one cast namely Kasera community engaged in the production of metal wares with the production units knowledge/technique of production passed on from one generation to the next since time immemorial.

All the units studied are a replica of each other in terms of their size/production capacity with each producing 500kg of metal ware every month. As stated earlier almost all units concentrate on the production of the utensils which form the core of the output such as Parat, Thali, Bhaguna, Gamala, etc. whose demand is perennial in nature. On an average 4-5 members are engaged in the production process and at least 2 hired labour.

The concept of hired labour here implies not hiring labour for certain units of time such as hour, days, and month. It is a process based hiring where a certain part of the production is entrusted to the hired labour and he is paid according to number of units of the product that he completes for the task interested. The rate of payment for the work is pre decided.

While the output in any industry is demand driven here to the demand motivates the quantity of production but at the same time the quantity that may be produced is limited by the capacity of the production unit which cannot

be favorably increased because the industry has never seen sudden spurt in demand which needs to be mitigated by keeping an excess capacity in the production unit.

The growth or expansion that the industry has seen in many years has been primarily due to expansion in the family holding the production unit with another son in the family being accommodated in a new set up with the investment being undertaken from the saving of the head of the family of the original unit.

The output from the new unit is supplied to the same vendors located at some distant places in Bihar where the original unit supplies its product. An expansion in demand due to growth in population has sustained the new units that came up. The vendor family was also experiencing growth of family size that itself demanded setting up a new sales unit. Therefore, one event led to another and combined to build a new equilibrium.

Market Range

Any industry is ultimately dependent on the robustness of demand which provides reasonable rewards for it to sustain and flourish. The brass metal ware industry based at Pareo has survived on traditional market whereby, each unit has chosen to cater to the demand of specific geographical location not very far from Pareo (usually within range of 200 km from Pareo).

Due to captured market with no competition each unit does not face any competition and therefore able to survive in even nascent stage of its existence. The units situated at Pareo have made no efforts either to explore new product range or to expand to newer markets with high ends products, industrial product in order to increase their output, reach and income. Therefore, the traditionality of the industry in terms of nature of its supply and demand imposes a limitation on the growth and expansion of both the units as well as the industry.

Cost Structure and Revenue of Brass Units at Pareo

Based on the data of the 50 brass units sampled at Pareo the following cost structure per kg of output emerged for brass products at Pareo raw material cost 450/kg, labour cost Rs120 /kg cost of value addition(decoration Rs 25-30/kg, miscellaneous cost Rs.20-25/kg). Therefore based on the types of product and the value addition carried out in the product itself, on an average each unit has to bear 600-625 rupees of the production cost per kg of output. This is an average cost of taking into consideration different units of product produce by a producer as conveyed by the producer.

The producer shared that they receive on an average 700 rupees of returns per kg of output for undecorated products. The returns increased with the nature of demand for a product being high or low. The decoration on the product and the intensity of the demand during a particular season increased its value.

A high intensity of demand increases the returns on a product with the cost of production nearly constant (not affected by seasonality of output). An average producer gains on an average a minimum of Rs100/kg on perennial products (undecorated) or 100-200 Rupees on perennial products decorated Rs200 and above for undecorated during season and 300 and above decorated products during season.

Based on such calculation, it is apparent the production unit at Pareo producing 500 kg of output stands to gain at least 50,000 per month if it is producing undecorated products with perennial demand and it stands to gain 150,000 of income per month during a good season for decorated products with high seasonal demand. Therefore, the range of income for a production unit at Pareo extends from a minimum of 50,000 rupees to a high of 150,000 rupees or any amount in between.

Conclusion

The state of Bihar which is often criticized for a lack of industries, Pareo is a living example of traditional industry which exists since time immemorial. It provides direct and indirect sustenance to over 1500 families situated there. 50 of the 200 units that exist in the village Pareo were studied for their potential to provide livelihood to substantial population situated there. The stability of the reward and its range dictates the logic for expansion at the industry to provide more people with income and employment. With the limited product range, lack of high end products and limited geographical reach, Pareo has failed to carve out larger brass metal market for itself in the region and the country. However, it holds the potential to become a big industry with expansion in product base technical financial and marketing support. All of which are traditional in nature at the moment.

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