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Socio-economic Profile of Gold Mongers and Goldsmiths-A Case Study of Sonapatti Area in Barddhaman Town of West Bengal

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Abstract

The Gems and Jewellery sector especially the gold industry plays a significant role in the Indian economy. India is deemed to be the hub of the global jewellery market because of its low costs and availability of high skilled labours. The Sonapatti area of Barddhaman town is famous for the location of hundreds of gold jewellery shops, resembling the shape of an industry. The paper attempts to reveal a comprehensive picture of gold mongers and goldsmith workers of Sonapatti area with special emphasis on their socio-economic profile. The paper also addresses several problems and prospects related to the study area. An in-depth study will help the policy makers to generate suitable strategies and the government to implement them, thus triggering the development of this informal economy. The study was undertaken by extensive field survey, collection of secondary data from authentic sources and data analysis by suitable digital cartographic techniques.

Key Words: *Gems and jewellery industry, Gold monger, Goldsmith, Marketing system and Occupational hazard.*

Introduction: Gold is dense soft shiny malleable & ductile metal. It is a chemical element with the symbol of Au & atomic number is 79. Melting point of gold is 1064. This metal has been a valuable and highly sought after precious metal for coinage jewellery and other arts since long before the beginning of recorded history. Applications of gold are found in jewellery, medicine, food industry etc. The consumption of gold produced in the world is about 50% in jewellery, 40% in investments and 10% in industry. India is the world's largest single consumer of gold as Indians buy about 25% of the world's gold purchasing approximately 800 tons of gold every year mostly for jewellery. India is the world's largest importer of gold. West Bengal has a rich and continuing tradition of craftsmanship for hand-made gold jewellery. Barddhaman town has also maintained the tradition of gold. Hundreds of gold shops are concentrated in a locality of Barddhaman town popularly known as 'Sonapatti'. Small ornaments of gold like chain, ring, small golden ball etc. are made by the goldsmith workers of sonapatti. It has bloomed into an industry.

Objectives: The prime objective is to study the socio-economic profile of gold mongers and goldsmiths of Sonapatti area of Barddhaman town. The other objectives are:

- i. To understand the procedure of gold-ore processing
- ii. To have an overview of gems and jewellery industry of India with special reference to gold industry
- iii. To probe into the problems and prospects related to the industry of the study area.

Methodology: Methodology of the present paper is based on collection of secondary data from various sources, primary data from field study and analysis for drawing the conclusion.

The Study Area: Barddhaman Municipality, the administrative headquarter of Barddhaman district has an absolute location of $23^{\circ} 13' N$ to $23^{\circ} 16' N$ and $87^{\circ} 49' E$ to $87^{\circ} 53' E$. It is located on the left bank of Damodar river. It has an aerial coverage of 26.30 sq. km. and it has a population of 321,937 (Census of India, 2011). The year of establishment of municipality is 1865. Barddhaman Municipality consists of 35 wards. It is well connected by the Eastern railway. The major portion of the town is developed between the two ends of the confluence zones of GT road and NH2. The majority of gold shops of Sonapatti area are concentrated in ward no. 20 (Fig. 1).

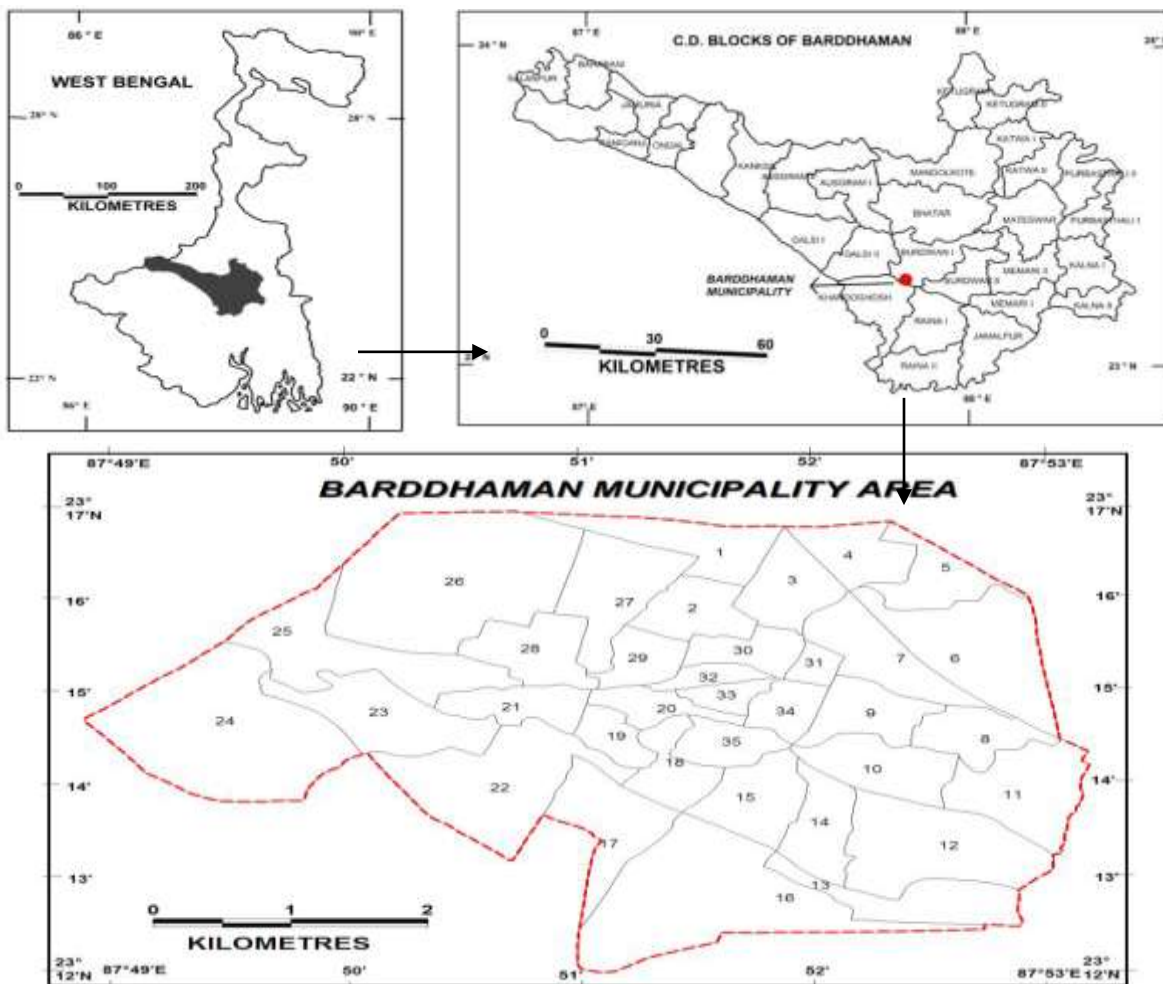


Fig. 1: Location Map of the Study Area

Results and Discussions:

Gold Ore Processing:

Cyanide Process: Cyanide extraction of gold may be used in areas where fine gold-bearing rocks are found. Sodium cyanide solution is mixed with finely ground rock that is proven to contain gold or silver. The gold or silver is then separated from the ground rock as gold cyanide or silver cyanide solution. Zinc is added to precipitate out residual zinc as well as the silver and gold metals. The zinc is removed with sulphuric acid, leaving a silver or gold sludge that is generally smelted into an ingot, then shipped to a metal refinery for finer processing into 99.9999% pure metals.

Advancements in the 1970s have seen activated carbon used in extracting gold from the leach solution. The gold is absorbed into the porous matrix of the carbon. The gold can be removed from the carbon by using a strong solution of caustic soda and cyanide, a process known as elution. Gold is then plated out into steel wool through electro winning. Gold specific resins can also be used in place of activated carbon or where selective separation of gold from copper or other dissolved metals is required.

There are many environmental hazards associated with this extraction method, largely due to the high toxicity of the cyanide compounds involved.

Jewellery: 24 k gold is soft (pure), it is usually alloyed with base metals for use in jewellery, altering its hardness and ductility, melting point, colour and other properties. Alloys with lower caratage, typically 22k, 18k, 14k or 10k, contain higher percentages of copper is the most commonly used base metal, yielding a redder colour.

Instruments for Processing Gold Ornaments in Sonapatti Area:

An Overview of Gems and Jewellery Industry with Special Reference to Gold Industry of India: The gems and jewellery sector is one of the most important sectors of Indian economy and



has also been one of the fastest-growing sectors in the past few years, contributing to 6%-7% of the country's GDP. The sector is highly export oriented, labour intensive and a major contributor to employment and foreign exchange earnings.

The domestic gems and jewellery industry had a market size of INR 251,000 Cr in 2013, with a potential to grow to INR 500,000-530,000 Cr by 2018. Considering its immense potential and contributions, the Indian Govt. has also declared the sector as a thrust area for export promotion.

Jewellery has a special significance in Indian culture. Backed by intricate Karigari and designs developed over the ages, it has been an integral part of Indian lifestyle and culture for centuries.

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Today India has a large domestic jewellery market. It is also the largest consumer of gold jewellery in the world with 29% share of the total global demand for gold as jewellery (World Gold Council Data for 2012).

Mining of gold in India is very limited and is restricted to the Hutti, Uti and Hira-Buddini mines (Hutti Gold Mines Limited) in Karnataka and the Kundkocha mine (Manmohan Industries Pvt. Limited) in Jharkhand (Indian Minerals Yearbook 2012, Indian Bureau of Mines). Primarily, due to India's limited Gold reserves, the yearly production of Gold was around 2 tons in the period 2011-12. As a result there is high dependence on imports. Gold is imported primarily in unwrought or semi-manufactured form (INR 292,000 Cr in 2012-13). However some gold is imported as jewellery (jewellery import was INR 27,000 Cr in 2012-13). The gold jewellery exports from India were US\$ 554.45 million in December, 2014, according to the latest data released by the Gems and Jewellery Export Promotion Council (GJEPC).

The Indian gems and jewellery industry developed as an unorganized sector, but the past decade has witnessed the emergence of organised players, with govt. liberalising gold imports into the country. The industry is, however, still fragmented, with local and independent store constituting roughly 80% of the overall market (Fig. 2).

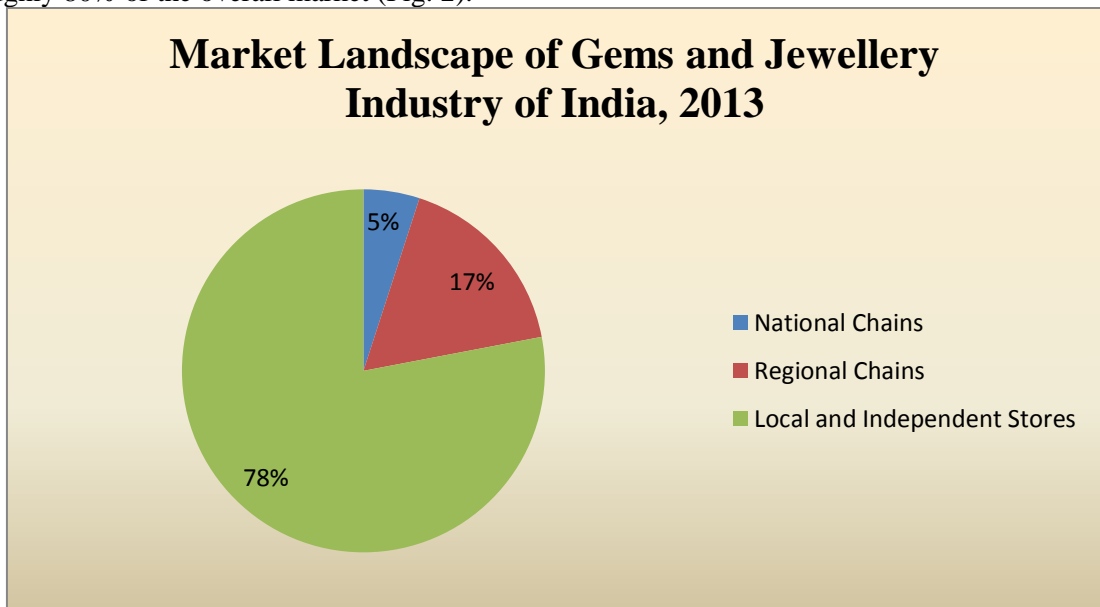


Fig. 2

Source: DTC Reports, Industry interviews; A.T. Kearney Analysis: FICCI Report, 2013

The growth of national chains is inhibited by the strong presence of local and regional players and variances in consumer preferences in designs, quality and material across regions.



Fig. 3

Source: Annual Reports, News Reports; A.T. Kearney Analysis: FICCI Report, 2013

While the share of organised players in gems and jewellery industry has been increasing, there is a risk of slowing down of this trend due to regulatory restrictions on gold imports and price differential between official and unofficial supply of gold in the market.

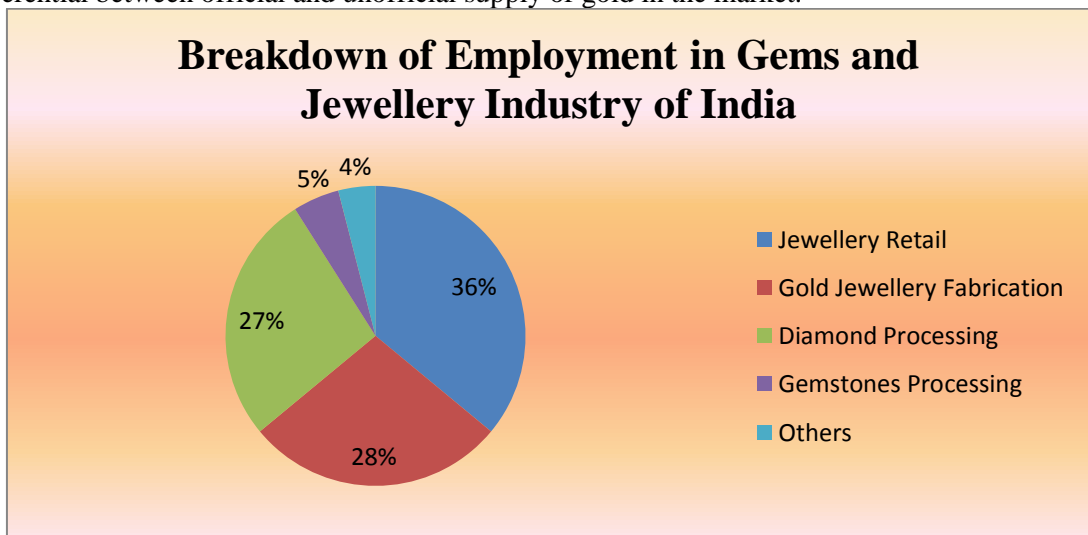


Fig. 4

Source: A.T. Kearney Analysis: FICCI Report, 2013

One of the most important contributions of the gems and jewellery industry to the economy is employment generation. The labour-intensive nature of the industry and the large share of small and fragmented players particularly in jewellery manufacturing lead to significant employment

Socio-economic Profile of Gold Mongers and Goldsmiths-A Case Study ... Sandipan Ganguly & Avijit Guray generation. There are about 2.5 million people directly employed by the industry. Diamond processing, gold jewellery fabrication and jewellery retail account for 91% of the total employees (Fig. 4). It is expected that the industry can generate 0.7-1.5 million additional direct jobs over the next five to seven years.

Socio-Economic Profile of Gold Mongers and Goldsmiths of Sonapatti area: Socio-economic profile of gold mongers and goldsmiths of Sonapatti area functionally depend on nature of resource, social mobility of men, their family background and capital and also on technology. The gold industry of sonapatti area is purely a human resource based industry. It falls under the broad category of informal economy. The livelihood of a lot of people depends on this industry. It is a source of employment for the goldsmith workers, means of earning for the gold mongers and scope of profit maximization for the mahajans.



Goldsmith workers busy in their works

Our field survey reveals that 72% of goldsmith workers working in different gold shops in Sonapatti area are permanently employed. The rest of workers are temporary. They mainly belong from the adjoining rural belts; though a small portion (15%) come from the adjoining districts. It is purely a male dominated industry.

The age composition of gold mongers and workers brings out a contrasting picture. The majority of gold mongers belong to the higher age group. On the other hand, the majority of goldsmith workers belong to the lower and middle age group (Table 1). Thus it is clear that the younger generation of gold mongers are less interested in this sector. The younger generation of goldsmith workers indulge themselves in this activity for earning their livelihood. Another important reason is that, in different stages of gold ornaments processing, healthy, efficient and energetic workers are needed.

Table 1: Age-Group Composition of Gold Mongers and Goldsmiths

Age Group	Gold Mongers (in %)	Goldsmiths (in %)
15-30	12	39
30-45	34	41
>45	54	20

Source: Primary Survey, 2015

From the field survey it has been found that 46% goldsmith workers have 5-6 members in family and 30% have 7-8 members in family (Table 2). In analyzing the dependency of workers it is found that 40% family has one working member and the rest have two or more working members.

Table 2: Goldsmith Workers' Family Profile

Members in Family	Goldsmith Workers (in %)
3-4	16
5-6	46
7-8	30
>8	8

Source: Primary Survey, 2015

In analyzing the caste composition of the workers it is found that 39% are from SC category and 29% are minority belonging to OBC-A (Fig. 5). Thus it is evident that mainly the SCs and the Muslims constitute the working force of this industry.

Most of the goldsmith workers of this area engage themselves upto 7-8 hours per day (48%). 8-9 hours or more works per day help to earn high income for their family needs and it is possible due to working at night, active support by other family members (Fig. 6). Sometimes, during festive occasions or social ceremonies, when the demand for gold ornaments is high, the workers even work upto 12-14 hours a day.

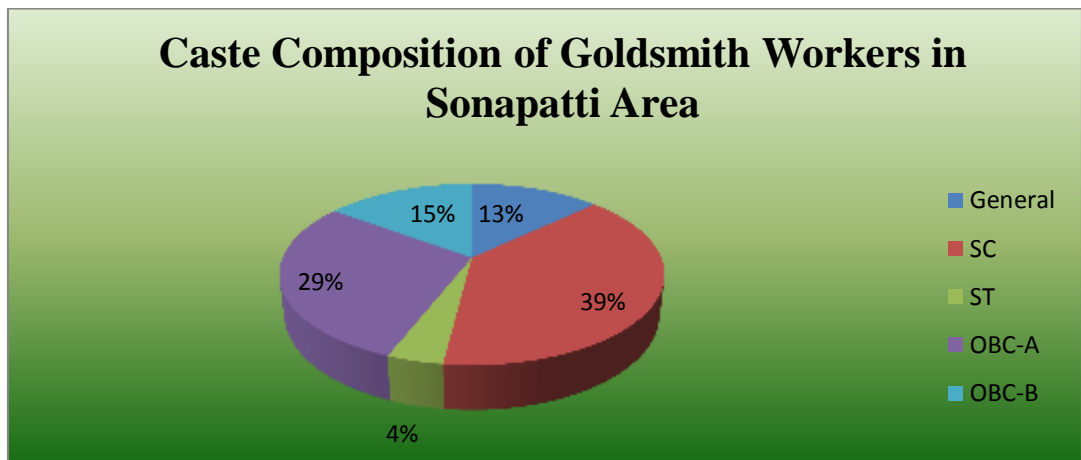


Fig. 5

Source: Primary Survey, 2015

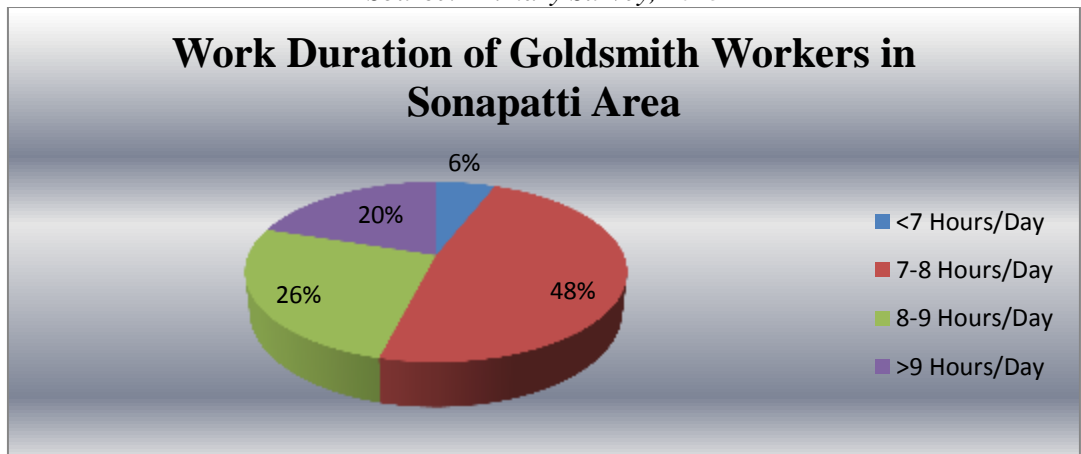


Fig. 6

Source: Primary Survey, 2015

Economic profile of gold mongers and workers of this area depends on marketing environment. Collection of raw gold, profit range of mahajans, demand of production in market area are major controlling factors to determine the economic profile as well as partially social status of gold mongers and workers. All aspect of total system is interrelated with each other and income of workers can be analyzed in two ways- one concerned with efficiency and duration of work of workers i.e. the inherent and interior system in respect of total system whereas marketing system is partially constant. But, if marketing system collapses due to low demand of production of gold ornaments, competition with other alternatives like city gold etc, then efficiency and duration of work of workers is not a matter for family income. In an ideal situation, 65% of gold mongers have an approx income of 15000-35000 per month, whereas 72% of gold workers are paid monthly wages of about 4000-8000 (Fig. 7 & Fig. 8), which proportionately relates to the daily wages of gold and silver ornaments manufacturing workers as prescribed by the Ministry of Labour, Govt. of India (Table 3).

Table 3: Daily Wages of Gold and Silver Ornaments Manufacturing Workers

Degree of Skill	Wages (Per Day)
Unskilled	196
Skilled	246.32
Highly Skilled	271.32

Source: Ministry of Labour, Govt. of India, 2013

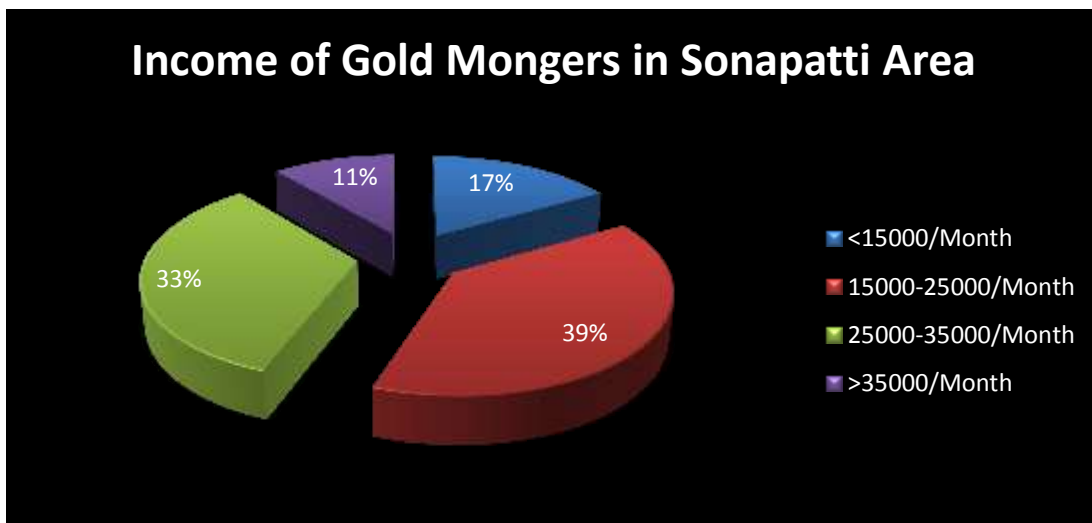


Fig. 7

Source: Primary Survey, 2015

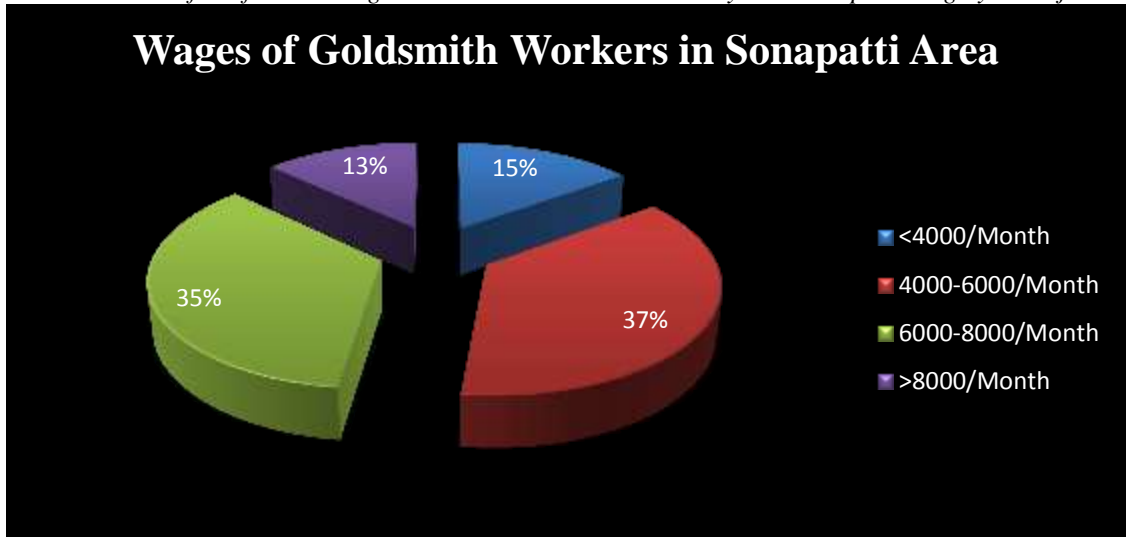


Fig. 8

Source: Primary Survey, 2015

There are fluctuations in terms of monthly income of gold mongers and monthly wages of goldsmith workers. During festive occasions and social ceremonies, both are relatively higher. Our study also brings out the fact that a significant proportion of workers (18%) are engaged with other alternative works like constructional works, small business etc.

The study reveals another interesting fact that the wastes that are produced in the gold shops and their manufacturing units are collected by a group of people (mainly women). They separate the fine gold particles from the wastes and supply those to the gold mongers in exchange of money. Thus they earn their livelihood in this fashion. Thus the gold industry of Sonapatti has a significant impact on the local economy of the area and the Bardhaman town and its surroundings.

Problems and Prospects related to the industry of the Study Area:

Problems: In recent times, the gold mongers and the goldsmiths are facing a lot of problems:

1. During the last few years there has been an unexpected price hike of gold (Fig. 9).

It can be clearly understood that during the last 10 years, there has been an increase of about 271% in the price of gold. Thus the production cost of gold made jewellery have increased. According to the opinion of most of the gold mongers, this increasing trend of price of gold is creating negative impact on their business.

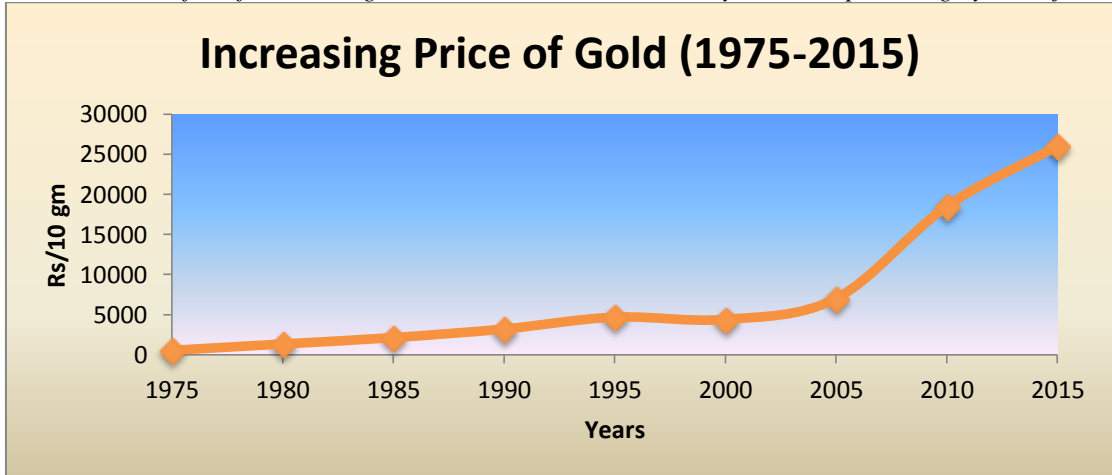


Fig. 9

Source: Commodity Research (Economic Times)

2. Most of the customers come here from the surrounding rural families with modest means. So it is becoming difficult for them to buy gold ornaments due to the increase in price of gold.
3. Lack of sufficient capital to run business, so the gold mongers lend money from the mahajans at high interest.
4. There are many giant gold retailers nearby such as P.C. Chandra, M.P. Jewellers, Senco Gold, Anantalal, Ramchandra etc. So the people are able to have readymade ornaments of new design easily. Thus the small gold retailers are facing a steep competition.
5. At present, people fear to wear gold ornaments in fear of dacoity, theft and snatch.
6. The ornaments of city gold are being used widely instead of gold ornaments.
7. The younger generation of gold mongers are showing less interest in this business.
8. No govt. help or subsidy is received.
9. The processing of gold jewellery requires highly skilled, energetic human resources. People have to learn this work from their childhood to become successful professional gold labourers. But due to the Child Labour (Prohibition and regulation) Act, 1986 (regulates employment of children under 14 years old); the gold mongers are unable to hire child labourers. So the needy families of the rural areas seek alternate work for their children. This in turn creates a huge crisis of professional, highly skilled matured goldsmith workers.
10. The goldsmiths face a lot of risks. Cutting and polishing risks include dust inhalation, eye strain, poor posture leading to back and shoulder problems, long working hours and accidents with machinery. Specific examples include:
 - *Lack or misuse of personal protective equipment (PPE)*: Goggles, rubber gloves, boots, respirators, and dust masks may all be needed at different stages of production;
 - *Locked emergency exits*: Some factories have all their doors, including the emergency exit doors, locked. The main reason is to avoid theft and/or higher insurance premiums. This practice is illegal in most jurisdictions;
 - *Unsanitary working conditions*: In polishing factories, large amounts of dust may be produced. Factories that do not have proper ventilation systems in place risk contributing to serious or fatal respiratory problems;
 - *Exposure to chemicals*: There is often a lack of training on chemical substances and protective measures for workers. Commonly used chemicals during jewellery making are

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cyanide, lead, zinc, cadmium, palladium, iridium, sulphuric acid, nitric acid, chalk moulds containing high percentage of silica, etc. The occupational hazards reported in jewellery workers due to the exposure to above chemicals are anaemia, digestive problems, nerve disorders, memory loss, concentration problems, cancer and so on.

11. Because of increasing price of gold, people would like to invest directly on gold to divert their money to other instruments and properties rather than on jewellery. So it will hamper the gold ornaments manufacturing industries in Sonapatti area.

Prospects: The Barddhaman's love for gold stems back to 100 years of old small scale gold ornaments manufacturing industries. The religious sentiment behind this metal is the main factor behind the development of gold industry. The prospects regarding the development of gold industry in Sonapatti area of Barddhaman town are as follows:

1. The fascination towards processing gold is directly proportional to rising prices and value. Thus we can predict that the increase in gold has been more in terms of value than in terms of consumption.
2. In Barddhaman, generally the small scale gold manufacturing industries are seen because of the prevailing competition with the nearby big cities and metropolitan cities like Durgapur, Asansol and Kolkata. So there is need for expansion of gold market.
3. Online trading affects significantly the small scale gold manufacturing industries. So to enlarge the standard of these industries in Sonapatti area, advanced technology should be used.
4. Traditional method of gold ornaments manufacturing should be transformed into the modern methods of manufacturing.
5. The goldsmiths are not aware of the changing market trends, fashions and designs in Sonapatti area. So there is a need to produce modern types of jewellery which meet the needs of recent urban trends.
6. Suitable steps must be taken by local and state governments, NGOs in terms of availability of finance, raw materials, promotion and marketing for the development of the gold ornaments manufacturing industries of the study area.

Conclusion: From the overall analysis, it can be comprehended that the gold industry in Sonapatti area of Barddhaman town, being a part of the gems and jewellery industry of India can play a significant role in the regional economy. At present, it is facing a lot of problems. Appropriate measures should be taken by the govt. to safeguard the interest of the gold mongers and the goldsmith workers of the area. As this industry has a vivid historical tradition, it is our responsibility to preserve it so that it can bloom in future. For the sake of development, the various problems of the industry must be solved through the holistic approach of integrating socio-economic and infrastructural development.

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