



PAYMENT OF MINIMUM WAGES IN PIECE RATE SYSTEM

-A Case of Agate Industry of Gujarat

Dr. Misha Vyas¹

¹Assistant Professor (Informal Sector), Mahatma Gandhi Labour Institute, Drive in Road, Memnagar, Ahmedabad, Gujarat, India

Abstract: Fixing fair and suitable piece rate as per the Minimum Wages Act-1948 is a complex issue. Minimum Wages Act was enacted in 1948. This is one of the earliest Labour Legislations in India. The Minimum Wages Act – 1948 is a welfare act applicable to the workers in formal and informal sector. The act aimed to protect rights of the workers of earning minimum wages who have less bargaining capacity and likely to be exploited. However, a large section of workers is out of the scope of this act even today. The appropriate Government may fix the minimum wages on basis of Time rate and Piece rate. However, the piece rate workers are not getting fair wages due to less bargaining power. There are many sectors where piece rate system prevails such as Bidi making, Brick kiln, Agate industry etc.

The piece rates are generally calculated and fixed up by the employers which tends to be lower than the minimum wages. The present paper addresses the issues involved in calculation of Piece rates in context to the Minimum Wages Act and its implementation constraints in Agate Industry of Khambhat Taluka of Anand District.

Index Terms: Piece Rate System, Minimum Wages Act-1948, Mahatma Gandhi Labour Institute, Agate Industry

1. INTRODUCTION:

The Minimum Wages Act -1948 provides for fixation of minimum wages by the appropriate Governments at the Centre and State for the different scheduled employments under their respective domains for different time periods. The act lists out the schedule of employments where minimum wages are applicable and are notified by the Central / State Government respectively. There are two parts of the schedule: Part I lists of the Non-Agricultural employments whereas Part II relates to employment in Agriculture. Presently there are 45 scheduled employments in Central sphere while in the State sphere the number of total such employments is 1709. In Gujarat there are total 46 scheduled employment listed (as on 25/5/2022).

The minimum wage has two components; The basic wage and the variable dearness allowance which is adjusted to CPI (Consumer Price Index) every two years.

In India, there is no uniform nationally applicable minimum wage. The minimum wage is sector/ occupation driven and varies from state to state for the same occupation / industry sector. Minimum Wages may fix on;

- (a) A minimum rate of wages for time work (“Minimum Time Rate”)
- (b) A minimum rate of wages for piece work (“Minimum Piece Rate”)
- (c) A minimum rate of remuneration to apply in the case of employees employed on piece work for the purpose of securing to such employees a minimum rate of wages on a time work basis (“Guaranteed time rate”)

Piece rate pay prevails when workers are paid by the unit produced (e.g. the number of bricks or shirt produced) instead of being paid on the basis of time spent on work.¹ Piece rates are frequently used in certain industries or occupations where the work is repetitive in nature, and where employees have a high level of control over the results. In developing countries like India, workers depending on piece rate wages often constitute a vulnerable section of workers, with many working in the informal economy. A large section of these workers contains women. Piece rate pay is frequent in salt making, bidi making, zari industry, Brick kiln, ready- made garment, cutting and polishing of stones etc industries and in global supply chains. The Agate industry is the industry where piece rate system is prevailing. The industry falls under the Stone Cutting and Polishing industrial category of the Schedule – 1 of the Minimum Wages Act- 1948.

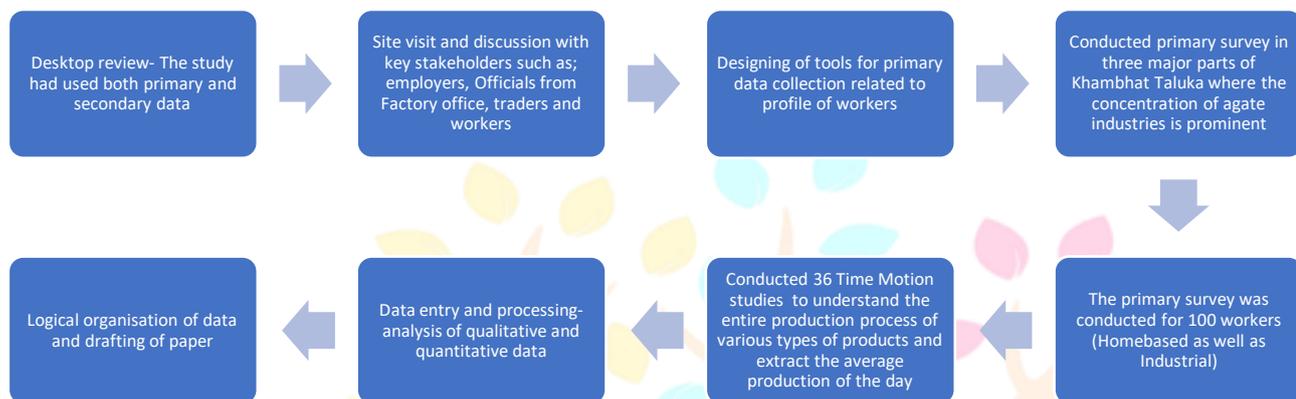
¹G. Billikopf, (2015), Piece-Rate Pay Design, ILO, and on K. Sankaran, Piece Rated Minimum Wages, ILO

The Agate industry of Khambhat taluka of Anand District is an ancient industry. Ornaments and other decorative items have long been manufactured from Agate and other stones in Khambhat and the surrounding villages. This industry is mainly controlled by the traders who own show rooms in the city and also export the products on a large basis in Middle East and African countries. A majority of the small-scale units in the industry are not licensed and operated outside the purview of labour laws and regulations. The Payment to the workers in all stages of manufacturing process is done on basis of the piece they prepared. Fixing fair and suitable piece work rate is a complex issue. It is generally fixed up by the employer due to less bargain capacity of workers.

2. MATERIALS AND METHODS

The Major objectives of the study are;

- ✚ To understand the piece rate system prevails in the Agate Industry and
- ✚ to calculate fair and suitable piece rates by using time motion study.



3. RESULTS AND DISCUSSIONS

3.1 About the Agate Industry:

Agate is basically hard semi-precious stones and appear as striped or clouded colouring. It is a stone that has been used for centuries as gems and as precious materials for the production of ornaments or small sculptures. Even at present it is widely used to make ornamental objects such as pins and brooches, and items with practical uses such as paper knives, inkstands, and seals. In addition, because of its hardness and ability to resist acids, agate is used to make mortars and pestles to crush and mix chemicals. Agate is found all over the world in places including India, Asia, USA, Africa, Brazil, Germany, Mexico, Italy and Nepal.

3.2 Types of Agate:

There are many types of agates. The common ones are:

- ❖ Fortification agate – one of the most common kinds of agate, which has bands crystallized in a concentric manner following the shape of the cavity.
- ❖ Water line agate – It is formed after the extra water in the silica settling layer by layer drains out. The orientation is controlled by gravity.
- ❖ Shadow Agate – It is an agate which has alternating translucent and opaque bands.
- ❖ Tube Agate – sometimes, tube like projections form in the silica gel, which weather away or leave hollow tubes that fill in with silica.
- ❖ Eye Agates – In some cases, the silica gel predominantly drains leaving only a droplet that beads up in the cavity, from which crystal growth further continues.
- ❖ Plume agate – these are filamentous growth that resemble feathers
- ❖ Geode agate – An agate with a hollow center and a crystalline outer fill.
- ❖ Moss Agate – it is a cluster of mineral inclusions which resemble landscape.
- ❖ Seam Agate – these form in cracks in host rock in parallel rows

3.3 Agate Industry of Khambhat:

Agate industry in Gujarat located at Khambhat – Gulf of Khambhat, also called Gulf of Cambay, trumpet-shaped gulf of the Arabian Sea, indenting northward the coast of Gujarat state, western India, between Mumbai (Bombay) and the Kathiawar Peninsula. In Khambhat, stone bead-making is a cottage and household industrial activity, carried out in the house premises. The types of stone that are most popular for the manufacturing of products are mainly Sfatik, Margaj, Kaalo, Kathiyaawaadi, Firoja, Zaamaa, Fancy, Kaalu, Aurangabad (Black), Aemetis Rose Coss, White king, Tiger, Red, Ratwaa, Black, Camel, Chaandi, Moss. They would fall under small scale industries, a self-sufficient and self-employed family unit. In these premises rough agate stones are transformed into various other products that are beautiful and smooth. A large majority of the small-scale units in the industry are not licensed and operate outside the industrial labour laws and regulations. Due to this, most of the workers employed in the industry do not have the benefits of organized industries.

The dominant merchant families in Khambhat includes Hindu, Jain and Muslim communities that have established distinct kin networks or alliances with politically powerful individuals or organizations. Through these connections it is possible to control the flow of raw materials, production and distribution of finished commodities. The major merchants produce specific varieties of objects for trade to local and international markets. Although there is considerable competition between these families, over time

they have established strong social and economic alliances so that each merchant family has a fairly secure market for which a specific range of objects is produced. There are, of course, fluctuations in style and raw material depending on the market demand, but, due to the large scale of production, these fluctuations generally appear as long-term trends, and result in the establishment of distinctive technologies for the production of standardized commodities.

3.4 Profile of Workers Working in Agate Industry:

With an object to understand the profile of workers working in Agate industry, a primary survey was conducted. The demographic details such as gender, caste, religion, economic and social details of workers were gathered.

3.4.1 Average Family Size:

An average family size found among agate workers was 4.9 The maximum number of family found was of 11 members. Average number of children reported is 2.25 out of them 1.80 average school going children found in the family.

3.4.2 Working Members in Family:

Out of average family of 4.9, the working members is 2.56 and out of total working members, average 1.89 members involved in Agate Industry. Out of total surveyed workers, 72 percentage of workers are male and 28 percentage are female.

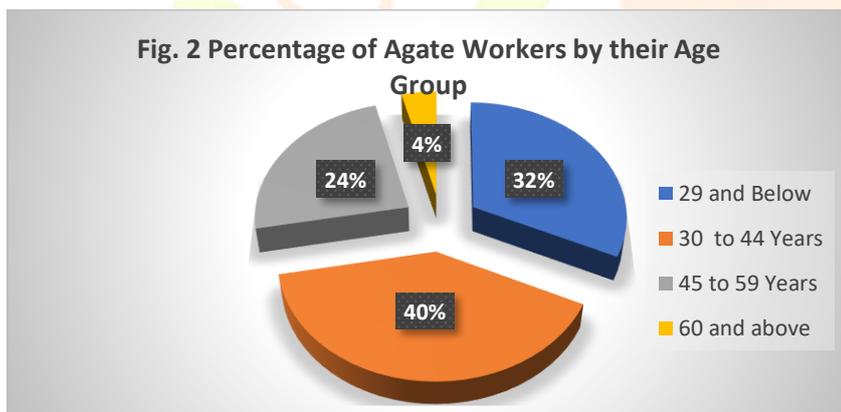
3.4.3 Percentage of Agate Workers by Religion, Social Group and Caste:

Out of total surveyed sample, 49.3 percentage are belonged to Hindu Religion and 50.7 are Muslims. Among the surveyed workers, the Thakor caste found prominently (27.8) followed by the Baraiya (15.6), Chunar (14.6), Malek (11.3) and Shekh (10.5). The other workers belong to different castes such as Saiyad, Rathod, Barber, Valmiki, Koli etc.

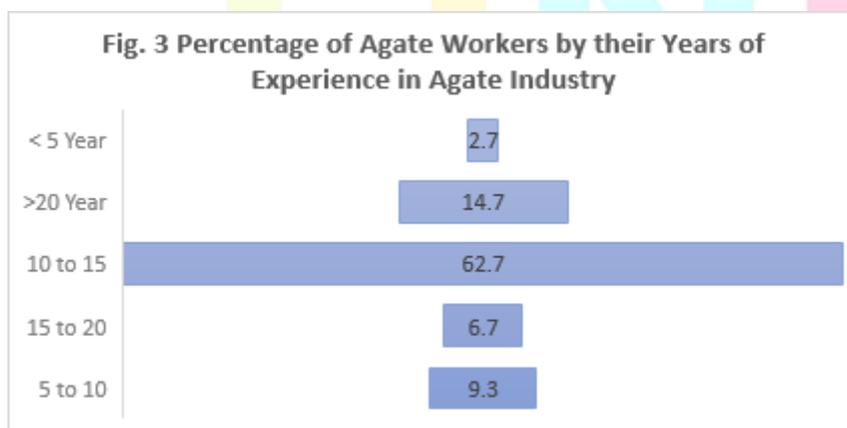
Out of total surveyed workers, 86.7 percentage are belonged to General, 10.7 Scheduled Caste and 2.6 belong to OBC (SEBC) social groups.

3.4.4 Percentage of Agate Workers by their Age and Experience in Agate Work:

It is seen from the fig. 2 that, out of total surveyed workers, the highest number of workers belongs to the age group of 30 to 44 years (40), followed by 29 years and below (32), 45 to 59 years (24) and 60 and above (4). The average age of experience of workers in agate work is 16.23 years.As per the fig. 3, out of total, the highest (62.7) are involved in Agate work since 10 to 15 years while around 14 percentage are involved in this occupation for more than 20 years.



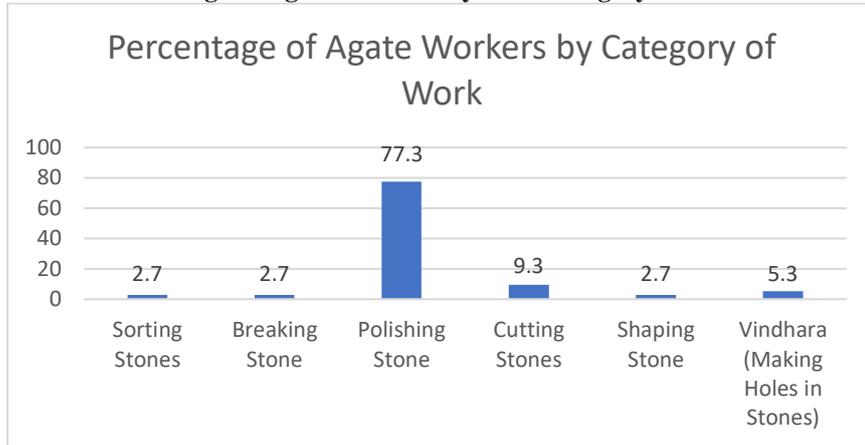
Source: Primary Survey Conducted by MGLI in the Year 2019-20



Source: Primary Survey Conducted by MGLI in the Year 2019-20

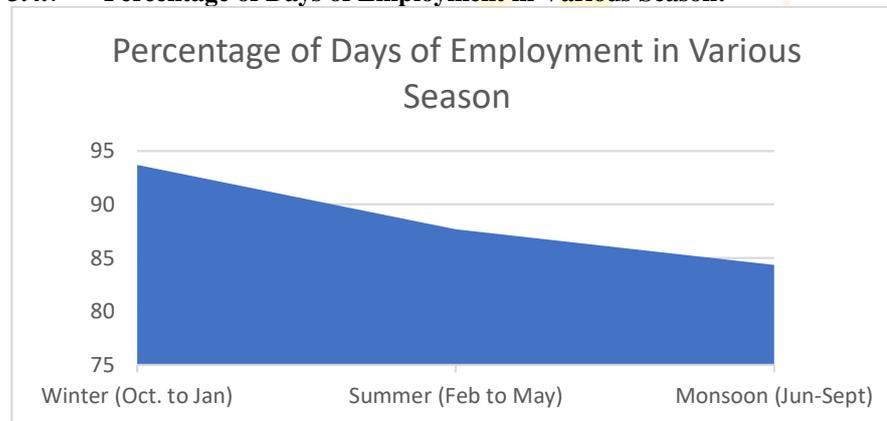
3.4.5 Level of Education among Agate Workers

Out of total, 19.5 percentage are illiterate, 62.1 percentage have undergone primary education, followed by Secondary education (16.5), and Higher Secondary education (1.3). Hardly 0.6 percentage of workers had completed their Graduation and Post-Graduation education. Children at the age of 15 to 16 years get engaged in Agate work and dropped further education.

3.4.6 Percentage of Agate Workers by their Category of Work:

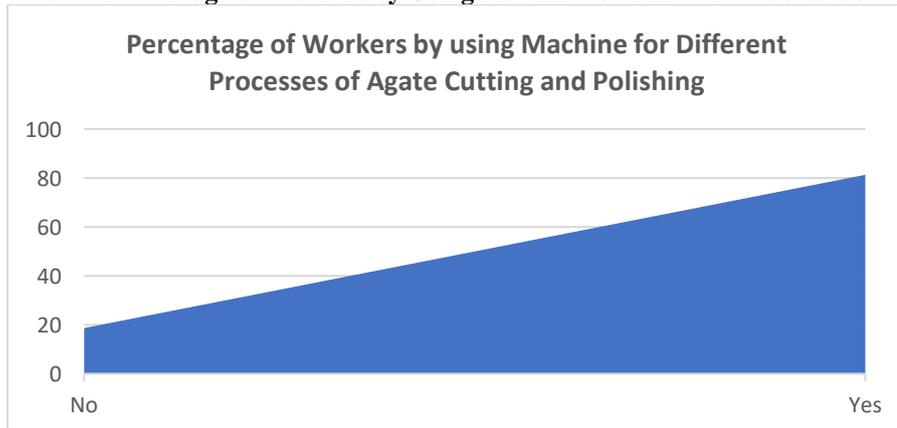
Source: Primary Survey Conducted by MGLI in the Year 2019-20

The agate cutting and polishing involves various processes and category of work. Out of total, 77.3 percentage surveyed workers are engaged in Polishing of stones followed by 9.3 percentage are occupied in cutting the stone while 5.3 are “vindhara” who are mainly making holes in stone for its various type of use (such as making a decorative tree, neckless etc).

3.4.7 Percentage of Days of Employment in Various Season:

Source: Primary Survey Conducted by MGLI in the Year 2019-20

The agate work is mainly based on the availability of raw material and market. Workers are getting more than 92% days of employment during winter season due to festivals. It reduces upto 89 percentage in summer and due to power cut and unavailability of raw material it reduces upto 84 percent in monsoon season.

3.4.8 Percentage of Workers by Using Machine for Different Processes of Agate Cutting and Polishing

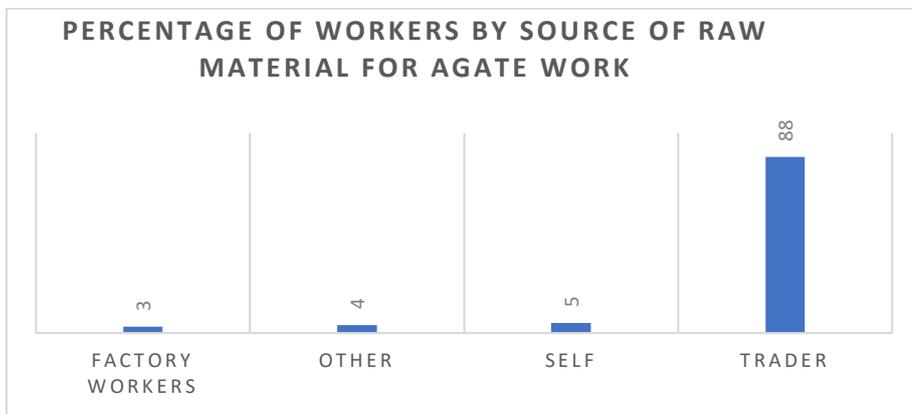
Source: Primary Survey Conducted by MGLI in the Year 2019-20

Most of the agate cutting and polishing is done at household level with use of simple machinery. However, there is around 19 percentage of workers (mostly “vindhara” and Stone brakers) who are not using machinery.

3.4.9 Percentage of Workers by their Source of Raw Material

The majority of surveyed workers (88) received the raw material for agate work from traders. It was also observed that there were very less workers who works at their own (5) followed by factory workers (3) and others who works in partnership are about 4 percentage.

Out of total workers, 89.3 percentage have reported that they do not sell the finished products themselves.



Source: Primary Survey Conducted by MGLI in the Year 2019-20

The traders provide with the raw material to these workers and take the finished products from them as like the job work.

3.4.10 Working Hours:

It is seen at the time of primary survey that an average worker works for more than 7.50 hours a day. The minimum hours recorded at time of survey was 4 to 4.5 hours. Majoring of workers work from morning 9:00 am to 11:00 am, takes a break of around one to two hours and again work from 1:00 pm to 4:00 pm again take break of one hour and work from 5:00 pm to 6:00 pm. Among female workers it was seen that they work in morning (from 8:00 am to 11:00 am) and during late evening (from 9:00 pm to 11:00 pm).

3.4.11 Level of Income of Agate Workers:

Individual monthly average income of Agate worker is between Rs. 6000/- to Rs. 7000/-. Very less percentage of workers (11) are earning more than Rs. 15000/- per month. The workers are paid on piece rate basis. Piece rate varies from product to product (Category / Type).

3.5 Setting fair Piece Rate for Agate Industry Workers through Time and Motion test:

Time and motion test was applied on 28 workers out of them, 8 were female and 20 were male workers. The agate work involves various products and processes. The types of products take different time in its preparation. The unit wise production is also varied from product to product so as prices. The production process was observed through stop watch to record exact production units of a day. As per the guidelines of ILO, major factors were considered while recording the units of production of a worker during a day

1. Fatigue and rest breaks
2. Time for setting up the work station
3. Time for packing and unpacking materials
4. Routine administration

The calculation of fare piece work should consider several aspects such as; standard output, working hours, existing minimum wages etc. The manner in which rate is calculated for each piece produced or task completed needs to be fair to both parties. The piece rate must be paid for each piece of work should not less than minimum wage. The worker must be paid at least the minimum wage for every hour worked or a "Fair Rate" for each task or piece of work they produce. During the Time and Motion study, the processing time of following nine major products were observed and recorded.

3.5.1 Various Categories of Products						
Product	Category	No of Workers Surveyed	Gender		Average Units of Production in a Day (7 Hours)	Average Production in an Hour
			M	F		
Tree (Beds)	Decorative Piece	5		5	150	21
Pyramid	Healing Product	5	3	2	65	9
Heart	Jewellery Item	2	1	1	70	10
Eye	Decorative Piece	2	2	0	24	3
Key Chain	Decorative Piece	2	2	0	60	9
Massager	Healing Product	2	2	0	11	2
Pan (Leaf)	Decorative Piece	5	5	0	35	5
Bowl	Crockery	2	2	0	14	2
Chakkar	Decorative Piece	3	3	0	135	19

Source: Time and Motion test Conducted by MGLI in the Year 2019-20

The piece rates should be decided in a way that it allows for reasonable variation in speeds between workers. If for example, the rate set is equal to the average rate of a sample of workers, this will inevitably mean that 50% of workers would be unable to achieve the minimum wage. However, including a correction factor of 20% would mean that practically all workers would be able to achieve the minimum wage. The calculation would then be as under²:

$$\text{Piece rate (Tree)} = \frac{\text{Minimum wage (per day or hour)}}{\text{Average output (per day or hour)}} \times \text{X}$$

For Example: The Minimum Wages for Skilled Category is Rs. 300/-. The piece rate of above item no. 1 (Tree- Decorative Piece) may be calculated as under:

$$\text{Piece rate (Tree)} = \frac{\text{Minimum wage (per day or hour)}}{\text{Average output (per day or hour)}} \times \text{X}$$

$$\text{Piece Rate (Tree)} = \frac{300}{150} \times 1.2$$

Piece Rate (Tree) = Rs. 2.4/-

3.5.2 Process of Setting Piece Rate through Time and Motion Study:

- Step-1 - Identify the different activities undertaken by a worker to complete the task;
 Step-2- Record time of at least five workers doing this work for one hour or until the task is completed, in the terms of product gets ready
 Step-3- Measure the speed of an average worker, rather than the fastest worker. Consider variations in terms of gender, age, trained, non-trained etc
 Step-4- Factor in a rate of work which can be kept up throughout the day, and an adjustment of 20% to ensure that all workers are able to earn the minimum wage
 Step-5- These factors are; Preparatory time, Break times, set up / take down times, time for routine administration

4 CONCLUSION

In spite of various recommendations and initiatives by State and Central Government, it is difficult to protect the workers under the Minimum Wages Act especially when the place of work is home. Also, there are more than one trader and the relationship between Employee and Employer is also not established.

The Minimum Wages Act has been extended to cover some sections of the home-based workers such as the “Agarbatti” workers, garment workers and the bidi workers. There are, however, examples of a large number of traders, in which the home-based work is predominant and are not listed under the Minimum Wages Act. Largely, the agate workers, especially who are working at home remains vulnerable and unprotected. Besides, the concept of welfare fund by a unique tripartite mechanism for providing protection to the workers need to be explored to improve their working condition as well as to provide social security.

REFERENCES

1. Labour Bureau (2014): Report of the Working Group of the Minimum Wages Act, 1948 for the year 2012.
2. A. Srija (2014), “Implementation of the Minimum Wages Act, 1948 - Case Study of India”, Global Journal of HUMAN-SOCIAL SCIENCE: F Political Science Volume 14 Issue 7 Version 1.0
3. Patel M, (2018-19), “Growth and Development of Agate Industry in Gujarat – A Case Study of Khambhat”, An Inter-Disciplinary National Peer & Double Reviewed e-Journal of Languages, Social Sciences and Commerce, ISSN No: 2455-734X (E-Journal)
4. Agate, A. C. (2007, July 16). Gem. Retrieved February 24, 2018, from Agate Creek Agate: <https://web.archive.org/web/20070716052933/http://www.gem.org.au/agate.htm>
5. Vincent, D., & Gupta, G. (2002). Critical Habitat Information system for Gulf of Khambhat-Gujarat. Chennai: GoI Department of Ocean Development
6. Ethical Trading Initiative – Respect for Workers Worldwide, “Setting fair piece rates for homeworkers- Key principles and possible approaches” Appendix 1. Using time-and-motion studies to set homemaker piece rates
7. G. Billikopf, (2015), Piece-Rate Pay Design, ILO, and on K. Sankaran, Piece Rated Minimum Wages, ILO

²Ethical Trading Initiative – Respect for Workers Worldwide, “Setting fair piece rates for homeworkers- Key principles and possible approaches” Appendix 1. Using time-and-motion studies to set homemaker piece rates