

# LIVELIHOODS IN DHARAVI

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Approval Sheet:

The Special Project titled

**'Livelihoods in Dharavi'** by Dipti M Panesar,

is approved for the partial fulfillment of the requirement for the degree of  
'Master of Design'.

Project Guide

Chairperson

External Examiner

Internal Examiner

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## **1.0 Introduction**

### **1.1 How did the project start:**

The Urban Opportunity project, a research initiative of Institute of Design, IIT Chicago, has provided the scope for adopting a collaborative approach of working between ID Chicago, IIT Bombay and non-governmental organizations like the Society for Human and Environmental Development (S.H.E.D) in Mumbai. This collaborative approach has enabled the acquisition of true and valuable insights on the livelihoods in city slums. Dharavi was taken as specimen for the study.

### 1.0.2 About SHED:

The Society for Human and Environmental Development (SHED) was formed in October, 1982, with the prime objective of improving the outlook and living conditions of those living in the slums/rural areas, especially tribal. At present, the Society is working in the major slums of Mumbai - Dharavi, Jogeshwari(East), Sagbaug and Kalina -and also in a village and 21 tribal hamlets of Saphale Block, Palghar Taluka in Thane district.

Ongoing programmes in the slums include setting up health and family welfare clinics, conducting medical check-ups and nutritional programmes for children, pre-primary education, adult literacy, providing sports facilities for the youth, organising mahila mandals and women's co-operatives, counseling, anti-drug campaigns, AIDS awareness, riot relief, and income generation for women by training in various skills.

SHED started its activities in rural areas in 1988 and has programmes dealing with self- development of the community awareness, women's development, education, health, agriculture and water management.

The Society's main skill- training centre for girls and women is at Kalina, Santa Cruz (East). The basic thrust of the centre is to create self-employment for girls and women and to make them economically secure. It also runs courses in tailoring, beauty care, embroidery, mehndi application, making soft toys, fabric painting, artificial flower- making, baking, cooking, craft, ceramics and computer.

### **1.0.3 The Urban Opportunity Project**

#### **Institute of Design, IIT Chicago**

**Concepts for improving economies and daily life in urban slums.**

The Urban Opportunity Project at the Institute of Design is an initiative to develop human-centered strategies and concepts for new products, services and businesses capable of generating sustainable economic improvement in urban slums. These solutions not only address the direct issues of daily life — water quality and access, sanitation, housing, healthcare and the like — but also the related problems of employment, communication, education and others.

Our approach is to develop solutions that harness the entrepreneurial spirit of local citizens and the financial stimulus of private investment, rather than on charity or government funded development alone. Design-oriented research and analysis of daily life in slums provides a unique viewpoint on the problems of urban poverty, focused on innovation and systemic solutions.

## **Background and methods**

The Urban Opportunity Project began with an exploratory phase (Phase I), conducted in the summer of 2003 in Chicago and in three cities in India. Through initial observation of the daily life of slum residents in India, the Chicago-based team discovered patterns of social interaction, economic activity and living conditions that inspired new solutions.

### **Phase I: Exploration**

Research and observation from a design perspective revealed many activities of daily life and local business that could be improved by new products, services or systems. We found many examples of seasonal, transient, and mobile businesses, and both large and small scale industries. Analysis of these businesses and related activities led to several design criteria that helped towards the solution concepts

## **Future work**

The Institute of Design is seeking individuals and organizations to become involved as partners or funders of the Urban Opportunity Project, and support future phases of work:

### **Phase II: Feasibility Planning**

refinement of initial concepts feasibility studies and business plans continued user observation in India rapid prototype in India of a selected concept finding partners in India and other countries

### **Phase III: Execution and Expansion**

design and implementation of large scaled solution prototypes creation of an ongoing research center to continue research and development in new business opportunities in slums.

## **2.0 Objective:**

Qualitative analysis of selected internal livelihoods to give a blue print for the developmental agencies of the urban slum.

### **3.0 Methodology:**

Document-Observing daily life and various livelihood.

To understand the scenario on a very general level, to introduced to the variety of livelihoods and all that goes into making of livelihood.

Study-Documentation through video and still images.

For the initial study of the livelihoods and the entire detailed process, to understand and make observations on initial stage.

Learning-Conducting qualitative interviews.

Qualitative interviews would help in understanding the lives of the residents. Such as day-to-day activities, cultural influences, the survival strategies, their viewpoint on self and economic progress and their contribution towards society. Their mental and emotional responses towards situation etc. In short, providing an insight to the inside story.

Analysing

Critical and detailed analysis of the entire selected livelihood, to give a detailed insight of the livelihoods and the issues involved, so as to conceptualise solutions to improve the conditions of the people.

Conclusion

Based on the insights of the analysis, suggesting a probable outcome in the form of solution.

#### 4.0 **Urban Slums** (Zopadpattis)

People look at slums in a very unacceptable way, where the outsiders have always considered it as problem. The system, which has been developed since years and is prevailing in Dharavi works for people who are otherwise thrown away by the system of society.

*Slums are not ‘problems’ that have to be ‘solved’ .....  
.....For the poor, they represent a solution.*



### **Dharavi-introduction:**

Mumbai, a reality which many would prefer to ignore. This is the reality of half of our city of people who have been forced by chance and circumstances to live for generations in subhuman conditions. It is the story of men and women who have survived despite our indifference, despite the hostility of the State, people who are also citizens of Mumbai.

Spread over 175 hectares and swarming with one million people, Dharavi is often called 'Asia's largest slum'.

It is much more than cold statistic.

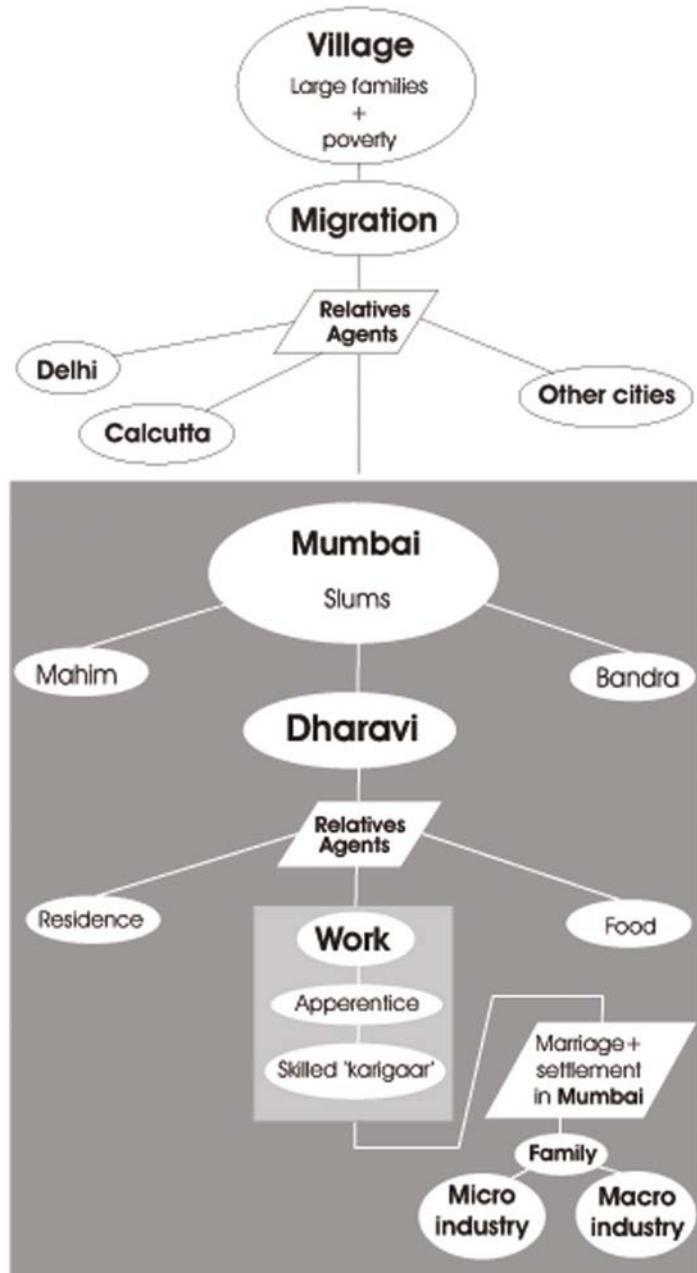
What makes it special are the people who live there, many of whom have defied fate and an unhelpful state to prosper through a mix of hard work, luck and ingenuity.

**Dharavi is all these but above all it is an extraordinary mix of the most unusual people.**



These livelihoods are of those people who are migrants coming from the rural areas, small cities etc. of India in search of work to earn their living

Lots of factors cause people to migrate, roughly the reasons can be stated as:  
Poverty,  
Lack of job opportunities,  
Natural disasters,  
Lack of market to buy their products or craft products,  
In search of jobs having more money,  
In search of better future, etc.



The migration pattern has been attempted to explain with the help of the displayed bubble diagram.

Assume a young person is staying in one of the remote villages in India. As the family being large, and the income not sufficient enough, financial crisis permanently exist. The family has acquaintance or some relative in one of the metropolitan city or at times some person wo promises a job to the youth. So, to relieve the family of the crises with little or no education at all, the youth sets out to the one of the metros. The relatives there are informed about his arrival.

The relatives arrange for the stay of the youth and also for a job, through their contacts.

At times, an agent is given commission to do the same.

The youth is initially hired as a trainee for a brief period of time and later he improves to turn into a skilled craftsman.

In a couple of months the youth is able to earn 3-5 thousand a month, which he considers a substantial sum. Hence he saves and sends some to his family. He visits village once a year, but due to lack of facilities and infrastructure, he does not intend to settle down there but instead in mumbai.

he marries in the village during one of his visits and returns to the city alongwith his wife. They stay together in a rented room. After they have siblings the financial status goes to a tight spot. His wife cant leave the house, so she starts earning small amounts by working or free lancing from itself. The children are put to school, and thus they no longer wish to return to their roots.



### **Demands of Relocation:**

This change and relocation asks or demands for two basic and crucial needs:

1. Shelter:
2. work:

### **Shelter:**

Dharavi is a place where maximum number of migrants takes refuge. People who are unknown of a new place and place like Mumbai, which is a city where everything works in a different manner. The migrants coming from the rural areas might find alien after stepping here.

To find a new place in city like Mumbai where finding a place to live is the most difficult task or can say practically impossible.

Dharavi has over the years developed an effective way to accommodate needful people inside her.

Like any other slum in the world Dharavi also stinks but it is unique, not only because of its size, making it the largest slum in Asia but unlike other slums which are generally residential, Dharavi houses a large number of cottage industry. People here are not simply remaining victims of the draconian government; they are very much weaving their path through policies and plans, deriving for them-selves a rational livelihood strategy.

### **Work:**

Its five lakh slum-dwellers, most of them migrants, are industrious people. They produce leather goods, ceramic products, readymade garments and food products with an annual turnout of Rs 3000 crore.

Every day, about 50 tonnes of chakli, 10 tonnes of banana wafers, 100 tonnes of chivda, 1 tonne of panipuri and 20 tonnes of chikki are produced in over 1,000 match-box sized units.

Reference: the-Hindu sep17th2000

### Tradeoff

Poor hygienic living conditions	Closer proximity to jobs and markets
Poor housing infrastructure	Extremely affordable means of housing
Low salary jobs	Availability of Jobs
Inadequate infrastructure support	Low overhead cost



## 5.0 Livelihoods:

Categorisation of livelihoods would be done on the basis of residents working inside Dharavi and residents going outside Dharavi for employment. For eg; barber shop, laundry, vendors, etc. who provide services inside Dharavi.

Residents who go outside Dharavi for employment such as the taxi-drivers, household servants, etc.

The above can be thus classified as :

### **Internal:**

Livelihoods in which the residents earning livelihood by working for Dharavi

### **External :**

residents earning living by providing services for outside Dharavi.



## 6.0 Macro-Micro Economics:

Dharavi is an example of a livelihood surviving on its own without any help from outside, rather providing services to the outside people. Thus the Dharavi plays an important role in shaping the economy of the city by providing services. In other words can be stated as influences on macro economy of the city.

For eg: leather goods produced in the cottage industry for exports. A huge portion of the hand-embroidered textiles is made here.

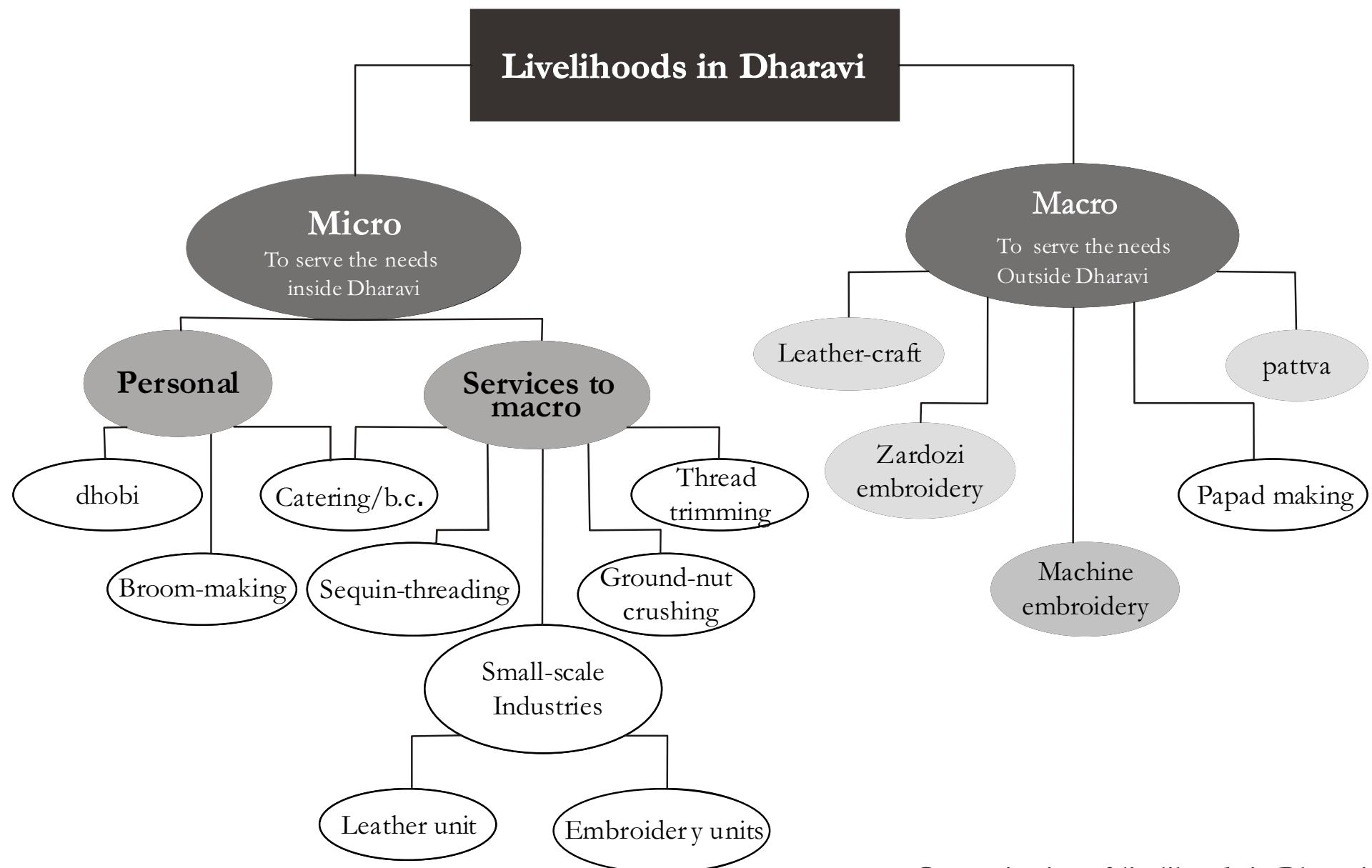
Within Dharavi, the economy at micro level. Livelihood such as barber and laundry etc.



As the part of the study of livelihood interviews were conducted with people having an occupation in Dharavi. These occupations were first randomly documented and later separated into micro and macro industries. Later after creating the scenarios and separating them, around 8 occupations were shortlisted and studied in detail, and to explain them scenarios have been created.

These livelihoods are:

- Machine embroidery
- Scarf-tassel making
- Hand-embroidery
- Plastic-flower stringing
- Peanut de-skinning
- Leather-craft
- Dhobi or laundry services
- Zardozi
- Idli making
- Broom manufacture
- Sequin-stringing
- Papad making
- Pattva or tassel making
- Mess services or BC
- Cap embroidery etc.



Categorization of livelihoods in Dharavi



For further study the area of focus is external livelihoods/Macro entrepreneurs:

#### 7.0 The Macro-entrepreneurs:-

Various small-scale factories and workshops were visited, and interviews were conducted. Through these, the few that were studied further are as follows:

Leather-crafts  
Zardozi  
Machine-embroideries  
*Pattva/ Tassel-makers*

Scenarios have been created to explain these livelihoods in a more humane view the mentioned above.



### **Leather-craft:**

#### **Scenario 1**

Ramesh hails from Muzaffarpur in Bihar. He is 25 years old, he is married and he came with his wife to Bombay 2 years ago. After some odd jobs, he started working at a leather bag making unit as a trainee with a stipend of Rs 35/- per day. Later after 6 months of working he has turned into an expert or 'kaarigar'. This unit gets the material from the agents or middlemen and are paid Rs 20 – 50 depending on workmanship required.

Ramesh works 6 days a week for 12 hours daily. He makes approximately 6 bags a day of sheep leather. His monthly income is 2000 – 3000. He dreams of owning a leather bag unit himself. He does not intend to return.



### Scenario2

Sanjay and his younger brother Murlidhar together came to Bombay 10 years ago. They hail from Aurangabad zilla in Bihar. After working as 'karrigars' for some years, they saved money to start off their own unit. They invested a capital of Rs 20,000/- to kick start the unit. They paid Rs 10,000/- as a deposit for a room to work in and a rent of 1000 per month. The rent tenure is renewed once every 11 months. They then invested in basic tools. The two brothers along with two more workers work on a very small scale. They do not have agents or dalal. They actually work to support a leather unit, which is situated right next to their workshop. They also undertake small orders.

Although they always wanted their own workshop; they never considered a bank loan, because they do not even have bank account of their own. They have a monthly income of Rs 5,000/- per head.

They visit their village once a year. They do not intend to leave Mumbai.



### **Zardozi:-**

#### Scenario1

Meeraj hails from Lucknow. His family is by caste system, zardozi embroiders. His elder brother came down to Mumbai in 1990 and worked as a 'karigaar' for 2 years in one of the numerous zardozi units. In 1992, Suleman, his elder brother started his own zardozi unit with help of his friends. Business grew and Meeraj was called on to Mumbai when his brother started a second unit I 1993.

The karigars work, in a small room (10x16 feet) on a 'cot frame', in groups of 7 – 12. They work from 8 – 16 hrs a day, and are paid Rs 10/- per hour, thus earning 100 – 150 per day.

They make samples of embroidery pieces and supply it to an agent quoting the cost of each style. These samples are then carried to export firms. At times, they do this themselves. The firms then buy off these samples as resources and later inculcate the method or style in their design patterns. The firm, at times, specifies the material for to be used too. Then the agent is handed the material and the prices are negotiated.

The agent then gets this back to the owner of the zardozi unit. The master kaarigar embroiders a prototype and the rest of the kaarigars follow the same.

The prices and deals are not very openly discussed and the kaarigars have no idea of the quotation of the job.

## Scenario2

Young boys 7 – 9 years of age are sent by their parents to Mumbai for job along with their chacha or uncle. These children mainly hail from remote villages in U.P and Bihar where the incidence of poverty is extremely high. As families consists of large number of offsprings, parents are unable to support them and send them along with the middlemen or chachas.

The chacha brings the boys to Dharavi to the 'Maalik' or owner of the zardozi unit at a commission. The maalik takes them as shahgirds or trainees. These children are provided accommodation and food and given a stipend of Rs 50/- a week. As the child picks up the craft in couple of months and then is promoted to the status of a 'kaarigar', and the salary increases to Rs 80 – 100/- per day. These small children work 6 days a week with an average of 12 – 16 hours daily.

Although the whole practice being illegal, there is a marked support due to the misconception that only the tender and small fingers of children can excel in this craft. Also due to the poverty by in the villages this practice cannot be halted as the children send money home to their parents.

As government tries to ban this practice, it still is very strong in Dharavi. The structures as being illegal are totally camouflaged with poor or sometimes no ventilation. Due to these conditions the children develop skin diseases and weak eye sight.

Only when this condition worsens with physical abuse, the police raids and children are rescued, but the 'maalik' gets the tip-off and he goes underground, only to begin another unit at a different location. The children on the other hand, are returned back to the village, only to be sent back by the parents.

Some NGO's like CCVC, Balaprafulla hold educational programs for these children in consent with the maalik. i.e. one hour of school daily. Also they conduct free medical and eye check ups for them and provide them with medication and eye glasses, respectively.



#### **Machine Embroiders:-**

Dinesh hails from Dharavi itself. His father used to work a machine embroiderer. Although Dinesh did his B.Com and worked in an office, he was not satisfied. He began to learn machine embroidery.

Two years ago, he set up a machine embroidery unit in his house and employed two people as trainees. He trained them as to turn them to 'kaarigars' and then, during their training periods he undertook just retail jobs for 2 months. Later, he started undertaking exports job also.

Dinesh charges by hours. He makes samples through agents and approaches factories and boutiques or they approach him with samples. When the deal is finalized. Dinesh uses his own raw material with just material provided by the client. He charges them on the basis of the amount of time required to embroider a particular design. He charges them Rupees 100/- per hour

The working hours are from 9am – 8pm except on Sundays. On an average the kaarigars earn 3000/- pm. While Dinesh is able to draw 7500/- for himself after deducting the expenses.

Currently he is training two more people and has bought 3 more motor sewing machines.



### **Patva :-**

The patvas make handmade silk tassels for export. It is a family business and a handicraft. They make samples and show it to clients. The orders are placed accordingly. Their clients are big hotels and exporters. This family comprises 3 sons, the husband and wife.

Each person, who is assigned a specific task, works on each piece in parts. If there is more work then it is commissioned to other pathvas. They sell for approximately Rs.400 a piece as each is handcrafted individually and takes up half a day each. They receive payments on time and are very satisfied with the business as they have permanent clients.

This is a family trade. They are from Faizabad, U.P they shifted to Mumbai 35 yrs ago. Earlier they lived in Mahim and later shifted to Dharavi.

## **6.0 Observations and Analysis:-**

On the basis of the various observations taken through documentation of the four different livelihoods the common issues in the above were studied under the following parameters for further analysis:

- Vocation
- Economics
- Shelter
- Work
- Tools

## Observations:

Vocation	Economics	Shelter	Work	Tools
<b>Leather crafts</b>	<ul style="list-style-type: none"> <li>- migrants from Tamil Nadu, U.P., Bihar.</li> <li>-An investment of Rs 20,000/- required to kick start such a workshop</li> <li>-Daily wage of Rs 20-50</li> <li>-Monthly income of an average kaarigar is Rs 2000/- to Rs 3000/-</li> </ul>	<ul style="list-style-type: none"> <li>- if an illegal unit, the workshop is then usually on the loft with a trapdoor, an almost zero ventilation.</li> <li>- approximately work in an area of 12x12 ft.</li> </ul>	<ul style="list-style-type: none"> <li>- age of the workers is 17 years onwards</li> <li>-Material and the order is secured through the middle-men</li> <li>-Daily work for 12 hours</li> <li>-Each worker is able to produce approximately 6 pieces, on an average, daily</li> </ul>	<ul style="list-style-type: none"> <li>- mainly use sewing machines that run manually and not electrically</li> <li>-The tools used are basic and mechanical</li> </ul>
<b>Zardozi</b>	<ul style="list-style-type: none"> <li>- migrants from U.P., Bihar,</li> <li>- the owners of the unit usually have had it as a traditional occupation</li> <li>-8-10 workers in each unit</li> <li>-Are paid Rs10/- per hour</li> </ul>	<ul style="list-style-type: none"> <li>- area required for the execution of the task requires larger amount of space,</li> <li>-Usually the area of the workshop is 20x20ft</li> </ul>	<ul style="list-style-type: none"> <li>-All the kaarigars work on a single piece together at the same time</li> <li>-They daily work for 8-16 hours per day</li> <li>-The master kaarigar embroiders the prototype of a pattern and the other kaarigars execute the same.</li> </ul>	<ul style="list-style-type: none"> <li>- the traditional method is used for the execution of this vocation</li> <li>-A huge cot-frame is used to stretch the piece of cloth and then, embroidery is done by hand</li> <li>-Certain intermediate stages of work are outsourced</li> </ul>

Vocation	Economics	Shelter	Work	Tools
<b>Machine-embroiders</b>	<ul style="list-style-type: none"> <li>-both; first and second generation involved in the occupation</li> <li>-education: basic primary education(i.e. up to std 5th)</li> <li>-Joined the trade as a trainee and later graduated to becoming an expert (within 6-8 months)</li> <li>-although, the kaarigars are paid on daily-basis; the client is charged according to the hours work gone into the process</li> </ul>	<ul style="list-style-type: none"> <li>- usually worked on the ground-floor</li> <li>- a very small area required to work</li> </ul>	<ul style="list-style-type: none"> <li>-salary- trainee- Rs 50/- per week</li> <li>-salary- kaarigars-Rs 3000/- per month</li> <li>-salary- owner- Rs 7500/- per month</li> <li>-a small group(5-6 people) work as one unit</li> <li>-the work is fetched by the middleman or the dalal</li> <li>-working hours; normally 12 hours</li> <li>-each kaarigars dreams to own his own unit</li> </ul>	<ul style="list-style-type: none"> <li>- electrical sewing-machines are used for the embroidery</li> </ul>
<b>Pattva</b>	<ul style="list-style-type: none"> <li>-Migrants mainly, from north India</li> <li>- traditional occupation</li> <li>-Work for upholstery</li> <li>-Accept only cash</li> </ul>	<ul style="list-style-type: none"> <li>- a traditional occupation; hence, done at the place of residence, as the whole family participates in it</li> </ul>	<ul style="list-style-type: none"> <li>- the pattvas have their own network, as to outsource the big orders</li> <li>-They work both through agents and independently too</li> <li>-Use their own designs and material</li> </ul>	<ul style="list-style-type: none"> <li>- traditional crude tools used</li> <li>-Mostly, the task is carried out by hand</li> <li>-Some tools have been invented by themselves as in to increase the production</li> </ul>

As all the occupations documented were craft- related; there were many identical points which have been found. They are as follows:-

**Vocations: -**

- a)The common factor which bound the four vocations was the fact that they all were craft related.
- b)These vocations actually catered to the needs of the external markets (i.e. outside Dharavi) both, local and the export market.
- c)The vocations were very much of a traditional practice, which both traditional craftsmen and the other migrants, had adapted to.
- d)The number of members in each unit does not exceed ten. If it did, they split to form an independent unit.
- e)Each one of them had a common dream; to have a unit of their own

**Shelter: -**

- a)A lot of the 'single' migrants, are sharing rooms with other bachelors at Rupees five hundred a month, unless if they have a family or spouse.
- b)The workplace is away from their place of residence i.e. they do not work where they stay.
- c)If the workspace was same as they stay, they would separate them, by the vertical growth of the shelter i.e. add on a 'loft' to the house, and twin that into the workspace area, as, to escape legal hassles and hence cover them completely.
- d)The rooms where these people worked or resided, on an average, would not exceed the area of 10ft x 10ft.
- e)Almost all rooms or 'houses' or 'units' where the subjects were residing or working had been taken on rent.
- f)The approximate rent of each room was Rs 1000-1200 per month
- g)The cost of each room if bought would be approximate 2-3 lacs, although the structures built are illegal

### **Slum Manufacture: -**

- a) Although being manufactured in the slums, the produce from these units are of extremely high quality and mainly for the exports.
- b) The technology being implied is largely traditional hence, low cost, reliable and time tested and mastered.
- c) The manufacture process mainly runs on the man- power and not the machines.
- d) These livelihoods, operate with the help of the middlemen or 'dalals'
- e) If the demand of a product increases more than the capacity of the manufacturing unit; it is taken up by the other units, either by paying a commission to the mother unit (i.e. where the product had been produced), or through the dalals or by plain duplication.
- F) The kaarigars initially join a unit as a trainee on a small stipend, later they save money and invest towards starting their own manufacturing unit'.

**Economics: -**

- a)All the observed industries work on hard cash.
- b)As almost all of these manufacturing units are illegal structures; they don not take loans or make the investments in the banks. They feel more comfortable with the local moneylenders.
- c)The migrant who join these units are largely poor villagers with very little money and unskilled craftsmen. They join these units as trainees with a small stipend of Rs 50-100/- a week (including food)
- d)After 9-8 months they graduate to become experts or kaarigars earning a salary of Rs 3000-Rs 5000 pm
- e)The rent paid for the workspace is approx Rs 1000-1200/- pm, while the cost of the place if bought would be 3-4 lacs. Hence these units prefer paying the rent, than to buying the illegal structures.
- f)A large amount of the money is pent on health and food, the rest is saved and sent to villages.
- g)As these units work illegally, the cost of hiring those falls cheaper to the quality output obtained from them, which is world class.

## **7.0 Critical Analysis:-**

Based on the various observations of the various livelihoods, and considering the mentioned parameters. This qualitative analysis was carried out in the following areas:-

- Economic structure
- Migration pattern
- Level of technology

### **Economic structure: -**

- a)In the economic structure of Dharavi these macro- industries are extremely important as they get the necessary revenue from outside Dharavi.
- b)The entire craft industry being illegal the actual turnover cannot be exactly pinpointed but would be 2000 5000 crores per annum.
- c)Although the income being decent and close proximity of the workplace to the residence the standard of living of the people could be bought up, but due to unavailability of the basic amenities, the cost of living is extremely high, hence the standard of living very low.
- d)Hence, due to which the extremely poor people, who come as migrants to Dharavi, even after obtaining a decent monthly salary are unable to get out of the vicious circle of poverty due to the high cost of basic amenities like water, food grains etc.
- e)This could be illustrated with help of the following chart, indicating the economic graph of the people in Dharavi. The graph shows the comparative ratio between poor middle class, (who could be even considered as people capable of moving out of Dharavi).
- F)This solely due to scarcity of the basic amenities. And surprisingly this scarcity is not due to the poverty but due to lack of network or infrastructure for, fulfilling the demand. Hence, one could conclude that poverty exists in Dharavi due to lack of basic amenities. Hence the dream of Dharavi not as slum can be only made into reality by giving it an infrastructure and not a step motherly treatment when compared to the city.

### **Migration: -**

- 1)The observation and references indicate that the basic cause for people to migrate from the rural areas to Dharavi is the financial needs.
- 2)Also, the village economy is able to sustain only a certain amount of population. Even if the population in the village increases the number of livelihoods remain the same, creating a surplus of manpower and thus, inequality. In villages, people have large families. Hence these people migrate in search of a livelihood, in this case to Dharavi.
- 3)The migrants to Dharavi belong to small towns and villages, largely from the states Uttaranchal, Jharkhand, Bihar, Andhra Pradesh, Orrisa, Karnataka and also, from Raigad district.
- 4)The migrants are young boys of 15-21 years of age, or young married couples.
- 5)The migrant is considered as unskilled labourer and taken in the industry as a trainee and taken in by the industry as a trainee, and not as an expert. It would take him at least 4-6 months to graduate from trainee to kaarigars
- 6)Almost all of the migrants live in sub-human living conditions, but no one of them intends to return to their villages.
- 7)There is a considerable amount of 'step migration', which occurs. In other words a young boy migrates to the city for employment, after a couple of years, he returns; only to marry and get his newly wed wife permanently to the city.

**Level of technology: -**

- 1)The technology used by the people in the observed macro-industries was, tradition hence, more manual; but time-tested and reliable.
- 2)At some places, these units had invented their own basic machinery, using scrap material, which completely addressed their needs.
- 3)While at other units, machines had not been invited, but they had their own needs, which are fulfilled being fulfilled by certain micro industries of Dharavi.
- 4)Most of the machinery used, require manpower to operate.
- 5)But on the personal lifestyle standards 8 out 10 people in Dharavi owned television, while 6 out 10 owned mixer/grinder. Although 2 out 10 owned a land-line telephone connection, 9 out 10 owned a mobile phone.
- 6)The technologies in these cases have been the ones, which have the ability to survive largely with manpower. As all the units are illegal.

## **8.0 Conclusion:-**

People involved in the macro-industries, or for that matter, any industry in Dharavi, come to Mumbai for employment - the place which might not have shortage of work ever.

The only most expensive issue is the problem of housing; one of the biggest problems prevailing in Mumbai due to shortage of space.

In Dharavi, if a migrant settles, he has such a close proximity to his workplace and the city, that he rarely has to travel for work.

As the vocations observed used traditional tools, it is time-consuming. In Indian history, it was the handwork of the craftsmen and weavers who generated the revenue in exports. But due to industrial revolution in the west, Indian exports suffered extensively and craftsmen starved to death. The reason behind this was the craftsman was unable to mass-produce, but a factory could imitate his work and mass-produce at almost one-quarter of its cost.

As a designer, one hence, does see the need of intervention of design not only in the tools used as for manufacturing, but also for better communication, and networking.

Dharavi is a self-sufficing unit. From mess-services, houses, to work, and services, Dharavi has it all, in its own way. If people do not get their kind of work; they generate a market to harness their skills, hence women and even children are entrepreneurs in their own small way

Still, besides this one cannot help, but get amazed by the ingenuity the people possess in Dharavi; whether it is space optimization or modification of the basic tools, or building a network or generating the vocation itself.

Dharavi is no place for the squeamish. But neither is it a place for the lazy, the apathetic, the moaners. In more ways than one, this throbbing heart of Bombay is India. Also in more ways than one, it forces you to see what India could be, and what's holding it back.

### **Reference**

[Http://www.digitaldividend.org/pdf/serving\\_profitably.pdf](http://www.digitaldividend.org/pdf/serving_profitably.pdf)

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