

# Study of Industries in Auroville

This study on industries in Auroville was conducted by Sri Mayapur Master Plan office as a part of the town and regional economic studies for developing the master plan for the sacred town of Sri Mayapur, Nadia district, West Bengal, India. Here is the complete document.

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### **Dawn of the industrial age in Auroville**

- History of the local inhabitants
- Local Geography, Afforestation and Female empowerment
- Vision and Raison d'être of the enterprise
- Entrepreneur's background and role
- Views of entrepreneurs on the success of enterprises
- Existing Potential
- Major teething problems and how they were transcended

#### **History of the local inhabitants**

The history of local natives in and around the region of Auroville is only 300 years old. The ancestors of the local inhabitants were foot soldiers of the Nayaks / Zamindars of bygone days, who had migrated to this region. After independence, when the Zamindari system was abolished, the local economy suffered a set back. The people become gatherers and pickers and foraged on the wasteland shrubs. There was no tradition of local arts and crafts, with a few persons involved in making oils. According to an Aurovilian, Kalyan, who had done research on Sociology and Anthropology of the tribes of Rajasthan with late Dr. Ravi Mathai (Director IIMA), he said that the social and anthropological character of this area is very strange. The local settlers don't have any traditional artefacts or any traditional craft. The area does not have tradition of weekly markets or hats, which is a usual phenomenon in tribal and rural settlements and which acts as an institution, where innovation, information, knowledge and culture is shared apart from material transactions.

Therefore none of the craft unit of Auroville have got any help or managed to tap or revived any traditional skills. There was a pool of labour available but basic craft skills were not there. Each effort of handcraft in Auroville is the endeavour of the individual entrepreneur in terms of learning, gaining expertise and further training to workers and getting quality products.

#### **Local Geography, Afforestation and Female empowerment**

In the beginning, the land in and around Auroville was basically wasteland and part of lateritic belt. It was barren with few trees and shrubs and vast open expanse of red earth scarred by network of gullies, carved out over the years by torrential monsoon rains. This was the result of more than two hundred years of deforestation, overgrazing and bad land management practices by the local settlers. The land was fallow and there was total loss of topsoil and acute shortage of water. As per temple inscriptions and local records, the area used to be a scrub jungle containing an abundant variety of species of trees, plants and medicinal shrubs and a rich fauna. No trace of bio-diversity had remained apart from a few palms, few banyan trees.

After Auroville was founded, the pioneers undertook a massive drive of soil and water conservation efforts, digging bunds, ditches, check dams and plantation of trees with most of the early Aurovilians involved in it. They started planting trees--a type of Acacia, which the Mother named as "work tree". This tree grows very fast, gaining maturity within 10 to 15 years, and provides enough shade so that other durable species, local as well as exotic, can grow under it. After maturity it can provide fuel and fodder. This formed the basis of the afforestation programme. The local population that were basically gatherers and pickers thus got an opportunity to procure fuel and fodder nearby. Female folk who earlier used to spend eight hours in a day gathering and picking twigs for firewood, could achieve it within half an hour. Afforestation empowered the female populace and they had ample free time. This free female work-force became a resource for the handcraft industries of Auroville and as per the experience of every entrepreneur, females were found to be more attuned for finer works like embroidery, design, knitting, painting etc. than males. They were found to have ample patience and perseverance to learn and they constitute a major part of work-force in most of the industries other than building construction in Auroville.

Thus in the context of establishment of handicraft industries in Auroville, a linkage is established with the local geography, people and resources.

### **Vision and Raison d'être of the enterprise**

There were various views on the establishment of enterprises in Auroville. Basically the enterprises were set up because:

- 1) The Westerners did not want to go abroad for six months, to earn money so they could then live for six months in Auroville. To avoid this they began with small enterprises based on their own liking and knowledge. For example Filature, a garment manufacturing unit was established by Mr. Michael and Valerie in a keet [thatch] hut on a very small scale, employing only two people.
- 2) The Westerners were attuned to a certain quality which the locals were not, hence not available. To fulfil the needs of the community, food-processing enterprises were set up known as service units. For example the bakery, jam-jelly and cheese-making unit was established to provide for community consumption.
- 3) After the afforestation program was completed, Aurovilians engaged themselves in arts and crafts of their own interest and some of them established enterprises. For example, Angad learnt and mastered the art of pottery and later on established an enterprise called Mantra pottery.
- 4) In the philosophy of Auroville, business is included as a part of the Auroville experience, the joy of working with one's own hands and developing beautiful and quality items. Some enterprises were established on the basis of these ideals. For example Abha developed the technique of flower pressing, designed greeting cards, lampshades and established Shradhanjali.
- 5) In some cases the vision was specific like Matthias had the vision of making Auroville self sufficient in energy and hence established an enterprise making Inverters and Uninterrupted Power Supply [UPS] based on solar conversion.

6) Some business units had been started as an exclusive support unit for a social program; for example, a toy factory in Kottakarai is the support unit of the Auroville health centre and health program, with all its profits being pumped into it. Similarly, a gemstone shop is dedicated to the green belt and afforestation program. Some business units are dedicated to a cause - for example a hammock and cloth bag manufacturing unit is dedicated to the development and education of the girl child, with the proceedings being funnelled into the cause.

7) In the beginning all of them were involved with research and developing new products and were driven by exquisite quality and beauty. The Auroville enterprises did not have a normal business approach in which a market was studied first and demand for the product was assessed and then a product was launched. On the contrary, it was the personal interest of individual entrepreneurs which was the basis of innovative and aesthetic products being made.

The units had a passive approach in tapping markets, relying on the clients' word of mouth. In all the cases, high consideration is placed on the quality of product, minimal use of chemicals and development of environmental friendly processes etc.

### **Entrepreneur's background and role**

All the entrepreneurs were personally involved in the design, development and production of the quality products. Since most of the products are based on research and experiment the credit of developing it goes to the ingenuity of the entrepreneur. Not all entrepreneurs had a background which is linked to the kind of work he/she is involved in; those in which the prior education and experience of the entrepreneurs have been useful in setting up the enterprise include;

**Namrita**, a qualified fashion designer, of **Aditi**, the appliqué making unit, which she established.

**Prema** of **Auromode** (garment export unit) trained as a garment designer in Paris.

**Jan's** knowledge of Carpentry helped him in establishing a woodwork enterprise.

**Matthias'** education and work experience as an electronics engineer helped him in establishing a unit of solar grid connected inverters.

In some cases, the entrepreneurs learnt and mastered a craft out of their own interest and irrespective of their previous experience.

**Angad**, of **Mantra pottery**, is basically a mathematics student of Oxford. He studied pottery for three years at the Golden Bridge Pottery in Pondicherry and developed many new glazing techniques and did research on clay and tile manufacturing. Now he has his own successful unit, Mantra.

**Abha** of **Shradhanjali** (flower pressed greeting cards) was a student of philosophy and a self-taught artist of flower pressing techniques; she now runs a successful business.

Tency of **Centre of Scientific Research (CSR)** is a sociologist by education but now runs a building research centre, which is at the forefront of innovative and low cost technology.

### **Views of entrepreneurs on the success of enterprises**

The involvement and personal interest of entrepreneurs in the production, quality control, design development is in line with the philosophy of Auroville i.e. the joy of working with your own hands and generating employment and money for Auroville. According to Michael, one of early settlers and masterminds behind the process, it is not true that Auroville attracts lots of people with entrepreneurial abilities. Even after 30 years, the situation is not very encouraging in terms of the number of units making profits. Out of 100 odd units. 25% are run successfully, another 25%-50% of the units are running to provide giving employment and generate some profit for Auroville, and rest are struggling to break even. In their defence, he also says that earning profit is not their main motive but rather creating an exquisitely beautiful and quality product.

As per Clemens, a long time Aurovilian, the main concern is that the industries or the manufacturing sector contribute only 30%-40% of the requirements of Auroville (finance, maintenance, projects etc.); the remaining 60% is from services (Aurovilians engaged in service sector), external grants etc. This is still a long way from being a self-sufficient town. There should be greater contribution from manufacturing sector, if Auroville aspires to be a self-sufficient town.

### **Existing Potential (Land, Labour, Linkage, Capital, Market)**

#### **Land**

The land for the industries has been provided as per the industrial zone proposed in the land use plan for Auroville. An individual who aspires to begin an enterprise is required to fill in an elaborate form, which includes not only the physical and financial requirements of the industry but also environmental characteristics, production process of the industry etc. Having submitted this in Aurofuture, and after having the project vetted, land is allocated in a suitable location in the industrial zone.

#### **Labour**

As there were no traditional arts and crafts existing, skilled and semiskilled labours were not available. On the positive side, a large pool of workers was available as hardly any economic opportunities existed. The entrepreneur's had to train these workers from scratch. Since most of the units are craft based requiring stitching, knitting, painting, embroidering skills etc. gradually females were more successful than males. In some particular type like leather craft, factory trained labour pool was available in Pondicherry but it was of little use in Auroville since the emphasis was on handicraft rather than on machines.

#### **Market**

There was no potential in the beginning in the local market. The population of Auroville was really small and there was no chance of market amongst local tribes, the nearest market was Pondicherry. Since most of the products were craft based and innovative, the local awareness was not there. For example especially in case of leather garments, the trends and fashion were determined after launching the

product. Hence the focus of marketing shifted to the national and the international level. At the same time, being near to Pondicherry, which was a tourist place, Auroville had a small clientele, who could buy their product. Tourists visiting Pondicherry used to visit Auroville and the boutique as well. The different ways in which the industries established their market are described below:

1) For service units like Bakery, Jam-Jelly-Marmalade unit, demand existed within the community and they used to supply to Pour Tous (a collective food-distribution and sales point).

2) In most cases the product was new, a novelty unknown to the market. Since there were no advertisements for the product, it took time to catch on. E.g. - making appliqué from waste cloth pieces to produce bed sheets, table cloth, etc.

3) For leather and pottery, abundant local market and demand existed because leather and pottery units existed in Pondicherry. The Auroville products were better by virtue of their innovativeness and exquisite quality.

4) Most of the units marketed their products abroad and eventually became export oriented. The products included garments, incense, solar converters, toys, woodwork etc. Auroville and Pondicherry have potential linkage with all major nodes and cities in the region. Accessibility to Madras is a potential and all exports are done from there. Though some of the units depend on raw material available locally, most units depend on import of raw material from other parts of the State, other parts of India and abroad.

## **Major teething problems and how they were transcended**

### **Availability of Finances**

In the beginning there was nothing in Auroville and Aurovilians worked together to create infrastructure. After the afforestation drive, some Aurovilians due to need and interest endeavoured to establish enterprises. The major problem that they faced was of finance. Most of them being foreigners, banks were reluctant to give loans at the beginning, hence in most cases capital was put up by personal savings, friends borrowings etc. Due to resource crunch most of the units were started on a very small scale. Most of the westerners did not benefit from government schemes and the bureaucracy and red tape involved were so overpowering that in a few cases it discouraged others to approach the bank. Eleven out of eighteen cases stated capital finances as the major teething problem. In one particular case [Mantra pottery] it was a policy decision not to borrow. In another case a unit managed to get a loan of Rs.10,000 twice by an NGO (Village Action Group).

### **Training and Communication**

Another major problem is that of training and communication with the local populace (six out of eighteen cases expressed this problem); the units being garment, furniture making, Ferro cement and pre-cast structures, carpentry etc. Particularly the units engaged in export had to develop the skills of their workers to bring their work up to export quality. In most cases, the training is given 'on the job'; according to the interest or inclination an apprentice may show in different fields, he/she is encouraged to pursue that field. Apart from 'on the job training', system of special

training for the beginners was found in two cases. One has a three-week training course in appliqué work and other has a few weeks specialized training in Centre for Scientific Research (CSR) in developing skills needed for the building trade.

### **Marketing**

Marketing being a problem was stated in three cases. Technological know-how, gap and problems in technological transfer were stated as teething problems by leather industries, furniture industries and specialized carpentry--toy making, utensils etc. The lament is non-availability of export quality accessories in Indian market, procedural difficulties in technological transfer for small-scale industries etc, which affect the quality of goods for export.

### **Legal Hassles**

Legal hassles, licenses, fees and lethargic bureaucratic procedures were also mentioned by two units, both being major export-oriented companies, one which makes UPS based on solar conversion and other which makes incense and aromatherapy products.

### **Other problems**

Lack of basic infrastructure, especially power and water supply, were mentioned in two cases. The problem is lack of planning efforts in centralized infrastructure. At present Auroville is highly decentralized. Communities and units are scattered all over 2400 acres, so it is difficult to provide centralized infrastructure.

### **Establishment of Local and Export markets**

As far as establishment of export market is concerned, each case studied is unique. In most of the cases, the market was Europe with France and Germany in particular. Only in the case of Maroma do we find that products have a worldwide market. Generally orders were small to begin with and gradually grew bigger with time.

Some of the export units established their market through their previous acquaintances in Europe, whereas others developed a foreign clientele through tourists who visited their boutique in Auroville and placed orders. Some units send free samples and their catalogue to import houses in Europe and thereby obtain orders. Karuna, the entrepreneur of Discovery, sent free samples to the import houses of Germany, and having liked some of his products, they placed their orders. In only a few cases do we find a sustained marketing strategy with products displayed in fairs, as in the case of Maroma, or an exclusive exhibition such as Aditi put up.

Auroville products have become a trademark for their quality, exquisite craftsmanship, innovation and environment-friendly manufacture, and entrepreneurs claim that not a single product has been rejected so far. The entrepreneurs ensure the quality and delivery in time.



### Legal Structure and organisational form

- Legal status of Auroville Foundation and enterprises
- Organizational types and ownership rights
- Autonomy--Advantages and Disadvantages
- Levies and Contribution
- Role of sub-statutory bodies

### Legal status of Auroville Foundation and enterprises

**Auroville Foundation was established by an Act of Parliament in 1988**, making Auroville a legal entity. The Act states that, Auroville as a vision could be of tremendous service to the nation and the world at large. Auroville was considered to be an experiment in human unity and was put under the **Education Ministry in 1988**. The land was acquired by the Government and transferred to the Foundation, which hence owns all the immovable property and assets of Auroville. There are various trusts operating under the umbrella of Auroville Foundation which are considered as trusts operating in the public interest; for example, there are trusts for handicrafts, construction, foreign collaboration etc. All the enterprises are part of a trust. Large exporting units form a single trust; other various smaller units form part of another trust.

The entrepreneur who has established the unit or enterprise is appointed as the trustee and he/she can act autonomously in taking any decision for the benefit and planning of the enterprise within certain limits. Hence, as one of the entrepreneurs says, the enterprises in Auroville as an entity do not exist in the eyes of Government of India. Any small-scale industry registration or government registration is not done as everything is the property of Auroville Foundation. **The only legal institution is Auroville Foundation.**

### Organizational types and ownership rights

In order to operate a business unit in Auroville, the unit is put under a trust and the entrepreneur hands over the unit to the trust. The trust has a management contract with the Auroville Foundation and it becomes part and parcel of the Foundation. Then the trust comes under management contract with the entrepreneur and he is re-appointed as trustee. In terms of designation, he/she is called an executive. Thus a business unit becomes part of Auroville Foundation and enjoys the same exemptions and other benefits which apply to the Foundation. There can be additional trustees apart from the executive(s) in a trust. Depending on the scale of operation, a trust may have only one business unit under it or many small business units may collectively operate under it. For example Auromode, a large hand-painted garment manufacturer and a unit is the sole member of the trust 'Auromode'. There are about 130 different types of business units operating in Auroville and these are under various trusts.

All the executives are trustees but all the trustees are not executives. The trustees can be senior members of Auroville whose function is to be the guardian of the vision.

In certain cases, mature units that are not in Auroville have been handed over to the Auroville Foundation, like that of Mr. Kalyan, who handed over his successful leather craft unit located in Pondicherry to the Foundation and then moved to Auroville.

The executive of the enterprise enjoys ample freedom in taking decisions regarding expansion and management of the enterprise. However, some decisions have a limited degree of autonomy. These restrictions are regarding immovable property and assets. The land on which the unit stands is given by Auroville and is owned by the Auroville Foundation. Though the executive may have put his/her own capital into the building, the ownership rights remain with the Auroville Foundation and the executive cannot claim immovable assets.

This is true for residential buildings as well. Executives can open bank accounts, can go in for business collaborations and partnerships but cannot pledge as collateral any immovable property and assets within Auroville. They can pledge movable assets like tools, plants, machines etc.

During interviews, various executives expressed different points of view regarding their status. As per Martina of Le Gourmet [the jam-jelly unit], she was the entrepreneur of the unit which was one of the first units of Auroville but now as an executive, she considers herself as caretaker and in charge of the unit. Most of the executives described themselves as manager and planner of the unit and they were happy with their status since one of the aims of Auroville is the 'Joy of possessing nothing'

### **Autonomy--Advantages and Disadvantages**

The executives of the units enjoy almost complete freedom in running the units. They are practically free to prepare their expansion plans, financial policies, labour policies, marketing policies etc. Hence the working environment and productivity of the enterprise depend a lot on the individual entrepreneur. In general, all the labour employed by Auroville units enjoy certain benefits, but above that a greater variation was found amongst different units. Some units provide housing assistance; some provide free and compulsory education, some provide maternity benefits to the working ladies etc.

Executives usually prepare projects for expansion and have to present them to the Auroville Board of Commerce [ABC] and get them approved. They do not get any help or guidance in arranging the finances and there are restrictions against pledging immovable properties. Usually the funds are arranged with their own savings, friends or collaboration with external agencies for which the executive is solely responsible.

Auroville does not have a single cooperative in spite of being committed to community ideals and cooperation. Every industry is run by an individual who can hold the vision which is also attuned to the philosophy of spiritual yearning to change things from personal consciousness. Other executives shared a common belief that in the Indian context, cooperatives do not work but an individualistic approach meets success by holding the vision. Production by cooperatives has been most successful in cases like the Japanese. They are very effective in collective production. Most of

the executives stated that the freedom to take decision for business is good but the fact that burden and risk solely rests on the individual is a bit unfair. If a business unit makes a loss, the executive alone bears the burden of it whereas if one makes a profit, he has to share. However, since no income tax is being paid to the government, it is understood that one shares one's profit with the Foundation. In case of executives leaving Auroville they are free to choose their successor. If not, then Auroville Board of Commerce (ABC) has the right to choose a trustee/executive to run the enterprise. When an executive leaves, he/she can recover up to Rs.5 Lakh from movable assets like machinery, tools, transport etc. For a bigger amount, they have to take approval of the Auroville Board of Commerce and this is generally achieved by establishing proof of the investments the executive had to bear in the beginning.

One of the executives has stated that 'the fate and status of a unit depends so much on the entrepreneur that if one is removed from the enterprise, it would become an empty shell in a few months'. This is not good enough for a town like Auroville, which aspires to have a closed economy and be self-sufficient. The common complaint was the lack of a central management pool which would give financial, material and strategic support.

### **Levies and Contribution**

Auroville Foundation is exempt from income tax as per the Act of Parliament. Since all the trusts are part of Auroville Foundation and business units are either part of a trust or a trust itself, no income tax is paid on the profits accrued. Sales tax is also not paid for products which are exported. The only taxes which Auroville unit pays to the Government of India are the sales tax on items which are sold in India. The units handle this without the Foundation getting involved in it as the Foundation has given the prerogative to each unit independently. This saves a lot of hassles and paper work for Auroville Foundation. Hence most of the units do not pay tax either to the state or the central government.

The unit pays 33% of the profits it accrues to Auroville Foundation every year. Apart from that, every executive involved in a business has to pay Rs. 750 per month to Auroville Foundation. The idea is that every Aurovilian engaged in business should support an Aurovilian engaged in services. Some of the executives expressed that the burden on industries is high, even though they do not pay any income tax apart from the 33% of the profit which goes to Auroville because they also contribute in kind which is not always taken into account when calculating their contribution. For example, most of the units sell their products to Aurovilians in cost price and most of the seconds are given voluntarily to Nandini, the free store in Auroville for the consumption of the community. Apart from this, the infrastructure of the business unit is also used by Auroville like vehicles, weighing machines etc. free of charge.

Auroville Board of Commerce [ABC] encourages that 67% profit remaining with the executive is not invested outside Auroville. Usually all the profits are reinvested into the unit to make new buildings, purchase tools, plants, machinery etc. Some of the executives even manage their own maintenance on personal savings or outside income. For example, an entrepreneur of appliqué work is reinvesting her profits into the unit since it is new. So too is an entrepreneur of appliqués and old furniture as he says that the business has to be nurtured at the beginning till it breaks even. One should have enough savings to support oneself during that period. In a case of

altruism, the executive of LOTUS, a hammock and cloth bag manufacturing and export unit, maintains half by working for another firm and invests all the profit from his firm for education and sports of girls, since it is dedicated to the development of girl child.

Auditing of accounts of every trust/business unit is done by a Chartered Accountant (C.A.) and then it is submitted to the Foundation which forwards it to the Comptroller and Auditor General (CAG) of India. Therefore, there is very little probability of scams taking place in the units.

### **Role of sub-statutory bodies**

(Auroville Board of Commerce, Funds and Assets Maintenance Committee)

Auroville Board of Commerce is a convenient business forum of manufacturing units. It is not a statutory body and cannot take any legal decision. ABC is a body which keeps records of all the industries and provide registration to a unit. The core group consists of 8-9 members, consisting of executives of different units, one of whom is selected as the secretary. The running of ABC is through donations from units based on their turnover. Out of 130 odd units operating within Auroville, 80 units have been registered with ABC. A unit is registered under ABC when its gross turnover exceeds Rs. One lakh per annum.

One of the main functions of ABC is to keep track of the finances of the units under it. Individual units, which audit their accounts through a Chartered Accountant, submit them to the ABC for scrutiny and audit twice a year; these are then audited by the Comptroller and Auditor General of India [CAG] every year starting from July. ABC interacts with CAG on behalf of the units and in the case of a discrepancy; the CAG may order a unit to be closed. During the last five years, three or four units have been closed. Last year a major unit of Auroville located in Pondicherry [Aurosarjan] was closed by order of the CAG.

One cannot start a business in Auroville unless and until one has become an Aurovilian, which means that one has spent more than one year in Auroville and has been accepted by the community. Even if one does not fulfil the criteria mentioned above, however, one can start a business under an existing unit with the permission of the executive.

ABC works in close collaboration with Funds and Assets Maintenance Committee (FAMC) to enforce the policies. All the financial policies are monitored by ABC and prepared under the guidance of Auroville Foundation, FAMC and other committees. Since Aurovilians faced difficulty in getting loans, two revolving funds have been constituted. One revolving fund provides short-term loans up to Rs. One lakh to help the units with working capital. This has been operating since the last 4 to 5 years and every year around 20 to 30 loans worth from Rs. 10,000 to one lakh each are distributed. Since the last six months, ABC has constituted another revolving fund for mid-term loans to help enterprises get established. Regarding the size of a unit, an attempt is made to keep the number of workers within 50 and if need arises for more production, usually a subcontract is given to another smaller unit. ABC also ensures that apart from Aurovilians, nobody can commercially exploit the brand name of Auroville. For example, in Madras, a mineral water company wrongfully used the name of Auroville on its label and found itself with a lawsuit filed against it.

ABC also keeps track of the consumption of water and electricity by the units and accordingly levies a charge. It also plays a role in determining the location of new industries with Aurofuture (Town planning department).

In case of disputes, ABC also acts as an arbitrator.

Thus the role of ABC is that of a facilitator, regulator, monitor and arbitrator for the manufacturing units of Auroville.

### **Role of Auroville Board of Commerce [ABC] in location of industries**

Any new industry is located in consultation of ABC and Aurofuture (Town planning department). An elaborate environmental form is filed which contains all the information and requirements of the envisaged unit. At present there is an industrial zone in Kottakarai village, called Auroshilpam. Two agglomerations were identified around two wells fulfilling the requirements of water for these industries. ABC maintains these wells. Since water is a scarce resource in this region, due consideration is given to the remaining capacity of existing wells vis-à-vis the requirements of the new unit. The other agglomeration of industries has been found in Kulapalayam village. Some industries are scattered and located near communities.

Overall units are decentralized and scattered in the region of Auroville and this is a hindrance in planning for centralized infrastructure. The scattered units have their own supply of water and take electricity from the nearby grid. Most of the entrepreneur's complaints were lack of adequate infrastructure and lack of planning effort.

### Typology of Industries

- Typology
- Raw material
- Production and Seasonal Variation
- Products and their Unique Selling Proposition [USP]
- Workspace and Utilization
- Employment and Training
- Competition
- Innovation, Technology and
- Environmental consideration
- Aspirations and Plans for expansion

There are more than 100 business and manufacturing units in Auroville, engaged in different types of activities. Major types of units are Garment (clothing and fashion), Food processing units, Leather units, Incense units, Furniture renovation, Electronic based items, Wood based items, Cloth accessories, Paper and flower based greeting cards, Metal based units, Clay based units, and Cement based units. The service and research units are Guesthouses, Architecture and construction etc.

### Typology

Each type of unit makes a variety of items, which are in the category of fashion, gift and utility articles. Various types of items made under each category are as follows-

1) Leather based units make a variety of items like shoes, sandals, shoulder/travel bags, garments, beaded leather products, crochet, fancy leather bags, beaded shoes etc.

2) Garment and cloth based units make hand-knitted sweaters, ladies and gents garments, ladies fashion garments, T-shirts, stuffed toys, aprons, children's clothing, patchwork bedcovers, cushion covers, table linen, silk painting on cloth. Quilted product, handloom, woven textile and garments in organic and vegetable dyes, sleeping hammock, hammock chair, cloth bags etc.

3) Electronic and engineering based units make Uninterrupted Power Supply (UPS), inverters, solar charge controllers, electronic generators, computer hardware and software, software development etc.

4) Wood based units make carpentry and specialized woodwork including furniture, office partitions, window and doorframes, gift items, salad bowls, spoons and other household articles. A few units also deal in old furniture renovation, antiques restoration etc.

5) Clay based units make pottery, stoneware and terracotta items, and handmade pottery, handmade glazed stoneware/pottery items.

6) Paper and flower based units make stationery and greeting cards and various paper items. Varieties of greeting cards are made in Auroville units. These are pressed flower cards, printed cards and stationery items and paper products, paper lampshades etc. Apart from this, they make offset and letterpress printing too.

7) Other craft units makes incense plus holders, mats, cordials, massage rollers, photo frames, silver and gold symbols etc.

8) Incense units make variety of incenses, perfumed candies, ambient perfumes, natural essential oils etc.

9) Metal-based units make cabinets, wind pumps, compressed earth block presses and all forms of metal work.

10) Cement based units make pre-cast and prefabricated building materials including structural components and other accessories like pre-cast biogas plant unit etc.

Out of the above mentioned manufacturing units, various types of units studied were garment and cloth accessory based unit, leather products, furniture renovation, electronic based unit, wood and craft based units, clay based units, cement based units, paper and flower based units etc. Out of service units, food-processing units and guest facilities were studied as they form part of business units. Food processing units in Auroville are only a few. Guest facilities are provided in various ways either they are central facilities or provided by the communities. Their broad classification and other details dealt are as follows.

### **Raw material**

Industries in Auroville are basically hand-based crafts and most of the requirements of raw material are met within Auroville, locally and within the region. Since the industrial set up is now quite old, some linkages in services and material transaction has been observed, but the scale of industries is not large enough to support backward and forward linkages. Most of the industries do Assembly, Production, Finishing and Packaging of products for export in house only. In a few cases of large units, streamlined production is also observed. Most of the respondents meet their demand of raw material within Auroville, locally i.e. up to Pondicherry, or from regional centres i.e. Madras, Salem, Ambore, Vellore, Coimbatore, Karur, Kumarapalayam etc. Depending on the type of industry, hinterland for raw material is different. Some examples are

#### **a) *Leather industry***

The leather industries get their raw material i.e. soft leather (Terra-cotta leather) from Madras, which is a large regional market for this kind. As per the entrepreneur, mercantile culture of Madras is good and a high quality of unblemished leather is obtained. Other centres for leather procurement are Ambore, Vellore but they are

not preferred due to poor mercantile culture of traditional Muslim leather traders. Pigments to make colour and other metal accessories required are procured from Madras.

**b) *Garment industry***

Most of the garment units in Auroville are export oriented and the type of raw material ranges from Cotton to China silk. Some of the raw materials are imported, for example, Auromode, a hand painted and printed garment export oriented unit, import its basic raw material i.e. silk from China and pigments to prepare dyes from Switzerland. Some cotton based garment manufacturing and handloom units get cotton from Madras or Salem and then dye it by organic process in Auroville or Pondicherry.

**c) *Food Processing industry***

The service units of Auroville, i.e. Agro-based and food processing units like Jam-Jelly, Marmalade unit depend on Auroville orchards for Guava, Mango, Rosella, Hibiscus flowers, Oranges, Citrus fruits, Coconut, Starfruit, Chiku, Natanga, Lemon etc. When Auroville orchards are unable to provide adequate fruits, they get them from Pondicherry. Agriculture in Auroville has been unable to provide enough, so the bakery gets wheat and maida [fine wheat flour] from Pondicherry and some fruits from Auroville orchards.

**d) *Wood based industry***

The wood based industries get their raw material from Acacia and other timber within Auroville. It is abundantly available due to planned afforestation programs.

The toy factory has used this wood to produce export quality toys, household accessories, carpentry items, hammock reapers etc. They also get better quality wood from Pondicherry.

**e) *Clay based industry***

The clay based industries, i.e. pottery units, apart from using the clay available locally in Auroville, also imports better quality clay from Gujarat. The fuel requirement i.e. fuel wood is met within Auroville only.

**f) *Flower pressed greeting cards***

The unit of flower pressed greeting cards gets flowers and various types of grasses and leaves from Auroville gardens and the surrounding countryside. Handmade paper is procured from other units of Auroville and the Pondicherry Ashram.

**g) *Electronic based industry***

The electronics based industry, for example Solar converters, Computer manufacturing unit partly meet their raw material requirements from import and some from other parts of India and these are mostly export based units.

**h) *Other units***

Incense and perfume manufacturing unit get their raw material within India and also from abroad.

The furniture unit which exports old renovated furniture gets old furniture from nearby states (Kerala etc.).



The waste cloth of garment unit is raw material for the appliqué unit of Auroville (40% raw material i.e. waste pieces is fulfilled within Auroville).

Some internal linkages within industries have been observed for items such as Stationery requirement which is fulfilled by Auroville units. Metal case for products such as uninterrupted power supply (UPS) are made from the metal based industry or office furniture requirement is fulfilled by wood based industries. The waste of wood based units is used as fuel for the furnace of clay and pottery based unit. Hammock reapers are made in one unit whereas the others do hammock netting. It has been mentioned earlier that the seed population of Auroville and scale of industries are not large enough to support forward and backward linkage and total self-sustenance.

### **Production and Seasonal Variation**

Most of the units engaged in export basically work on the basis of orders and some of them strictly on order basis, especially Garment industry (Appliqué work bed sheets, table cloths, ladies fashion garment, cotton garments, silk garments etc.), Leather industry (Leather garment, bags and accessories) and electronics industry (Solar converters, computers etc.). The variations in the 'seasonal pattern of production' remain constant. They work as per order in which usually the basic design guidelines are provided by the client. The pattern of production is as follows – October to February is very busy, by the end of February, export orders are finished. Next order of export is placed by April and production starts by May. March-April is a slack period whereas May to August is very busy. For the Christmas season export orders are placed by May or June and for some cases like Leather garments, goods should appear in the market by September. Thus, for Aurovilians engaged in export. May till September is very busy. The orders keep coming throughout winter. In a nutshell, beginning of summer is the period and winters are busiest. The industries depending on visiting tourists and sales in boutique have the same pattern of variation because number of tourists visiting Auroville reduces in summer and peaks in winter. Even the units having local markets have reported similar trends: during the summer they do not get many orders but by September/October they get fresh orders for Diwali. In the service industry of Auroville, the pattern of production is also the same, only a slight variation is found during the summer as the number of visitors goes down. Some of the industries like pottery making, flower pressed greeting cards and woodwork (toys, furniture, kitchen accessories) produce less during Monsoon due to slow drying of clay and wood seasoning problems.

A few industries build a stock during slack period. Some exporting units prepare semi finished ingredients from raw material and a ready stock of semi finished products. For example, Maroma, the incense unit, prepares the semi-finished mixture (Agarbatti masala) from raw material, Shradhanjali the greeting card unit builds a stock of pressed flowers during the slack period. Some of the industries stock up goods for the local and national market; however, for export they do not take risks due to the frequent changes in the design, tastes and trend in Europe.

### **Products and their Unique Selling Proposition [USP]**

Auroville products have become a benchmark of quality, Innovation and a symbol of Organic and Environmental friendly processes. Most of the units are handicraft based and so require less energy, are labour intensive and depend on individual's artistic capabilities. Though quality control can be achieved under strict supervision and by

using machines, work done by hand and hand-crafted can make every product a piece of art and design. Each product is unique and in some way different from each other. It is reflected in the high price of the product as well. Quoting an Aurovilian, who makes pottery, each piece of pottery and tile is not only a craft but a piece of art as well (hand painted and designed). How can you price it?

The prices of Auroville products are high and Aurovilians agree that they cater to a certain strata of society only. However, most of the respondents agree that in India, the demand for quality product is increasing day by day and even the national market is a huge market, which can be tapped.

As proof of the quality of products so far a majority of respondent claimed that not a single product exported has been rejected. Another edge is application of environmental friendly processes and insistence towards sustainable techniques of production, for example, organic dyeing, use of non-hazardous chemicals for bleaching etc. These products qualify in chemical tests conducted in Europe.

### **Workspace and Utilization**

Apart from a cluster of industries located in the industrial zone, some isolated units are located near communities also. Though there is a designated industrial zone, some units are scattered all over Auroville. Two major clusters were found in Auroshilpam and Kottakarai (industrial zone). The source of water is two wells, which is maintained by Auroville board of commerce (ABC) and shared by all. Scattered units have to manage their own supply of water and other infrastructure. Only in one case was home based work found during the study. In one case, a service unit was operating from part of a building used for another purpose. Only a few units surveyed were found to be operating from temporary workshops, otherwise most of the units have permanent workshops with clearly designated zones for storage, production, assembly, office, parking etc. Industrial complexes like Auroshilpam and others are well planned complexes. The size of unit varies from 400 sq.m to as small as of 50 sq.m of built-up area. Most of the industries have a demarcated compound as well. Overall space allocation seems to be on a higher side.

### **Employment and Training**

As per secondary information, Auroville employs 3500-4000 people under services as well as in business and industrial units. Most of them are from the 13 surrounding villages in the Bioregion of Auroville. About 3000 villagers are regular employee of various business and industrial units of Auroville. General trend in employment generated and training required and given by different units are as follows.

### ***Labour employed***

The units in Auroville do not use heavy machines, power looms or specialized machines and instead use labour-oriented pedal machines, handlooms, potter's wheels, etc. The process of production depends on manual labour and effort. The process consumes less energy and the products fall within the category of handicrafts. Hence industries in Auroville are labour-oriented and provide good employment opportunities in the region. In the cases studied, the total number of persons employed varies from a minimum of 9 in a bakery unit (Ganesh bakery) to 160 in Auromode (garment manufacturing and export unit). A few units employ large numbers of people, like Maroma (80 workers) and Centre for Scientific Research (70 workers). Other larger units are Leather (36 workers), furniture (30 workers).

Electronic [33 workers], Paper and flower (37 workers) etc. Aurovilians generally number one or two, basically acting as executives of the unit, but in some cases there are more, for example, in Auroville bakery 7 out of the 20 people employed are Aurovilians. In the solar based unit there are 6 Aurovilians out of a total of 33 persons employed. In the toy factory there are 3 Aurovilians out of a total of 15 employed. Participation of females was found to be very high amongst all the cases studied. Female empowerment and the suitability of females in doing specific types of work have already been discussed. However, some of the units are encouraging female participation as a policy and one of the units is dedicated to the development of girl child. 100% female participation in the production was found in Appliqué unit, Jam-Jelly unit, greeting card unit and hammock/cloth bag unit. In most other units, female participation is 40% to 70%. No female participation was found in furniture industry (old furniture, utensils) or the pottery unit. According to the executives, these two types of production process are not suited for female participation. Given the perseverance and deftness needed in the handicraft-based work like embroidery, stitching, knitting, flower pressing, sticking, appliqué, painting etc., women are better at it.

### ***Seasonal variation in employment***

The tendency of providing 'Temporary employment', or 'Hiring and Firing', policy was not used by any executive of any unit. All the workers are permanent and since these are craft based units, skilled and experienced workers are assets for the unit. In two cases part-time workers are also apart from full time employees. In one case, viz. the Appliqué unit, apart from having 17 full-time employees, the unit also takes 33 local village girls on a contract basis for doing embroidery work thus generating partial employment for 33 more girls.

Thus the workers in Auroville unit work with a feeling of social security and a sense of being taken care of. Subcontract of work to smaller units has also been observed.

### ***Commuting distance***

Workers generally come from nearby villages located in the surrounding area. The maximum commuting distance for female workers is around 6kms and the mode used is cycle. Male workers come from as far away as 10kms. Some units provide help in purchasing of cycle.

In most cases commuting distance is around 3-4kms, in some cases it is 5-6km.

### ***Wages***

Since different units require different levels of skill, average wages differ accordingly. Depending on the load of work, different units have different wage policies. Some are based on unit amount of work performed as per sqm of cloth stitching or number of pots made etc. Some are on per day basis and some are given monthly wages also.

The working day usually consists of between 6 and 8 hours, but at Lotus it is only 4 hours. Every unit provides extra wages for extra work. Different wage rates for different types of skills for skilled workers are as follows:

in garment units it is Rs. 65/- per day to Rs.150/- per day.

in service units it is Rs. 43/per day to Rs. 65/- per day.

for furniture and carpentry it is Rs. 75/- per day to Rs. 150/- per day.

Some units also pay on a monthly basis as, for example, the paper and flower unit which pays Rs. 1400/- per month or the pottery whose workers are paid Rs. 3000/ -

per month. In general, wages given by Auroville units are 20%-25% higher than the average wages paid for the same skills in the surrounding region.

For unskilled labour the variation in wage rate is Rs. 10/- per day to Rs. 100/- per day and some units give Rs.600/- to Rs.900/-per month. Apart from wages, there are scores of beneficiary programs provided by the units. Having joined an Auroville unit a worker automatically comes under the umbrella of certain social securities, for example, free facility of Auroville health centre, facility of education etc. Every unit is providing provident fund, paid leave, insurance, medical allowance, accident allowance etc. and as per the policies, different units provide different incentives. For example Martina of Le Gourmet provides her workers with maternity leave and different packages of paid leave if the employee ensures that a newborn child will be breast fed for one year.

Apart from this, regular body soap, cloth soap, part payment for purchasing a cycle, uniforms, etc. are provided and regular language classes in French and English are given along with basic instruction on health, hygiene and nutrition.

Most of the units ensure that the workers get regular instruction in French and English and there are incentives if children attend night schools.

Some unit executives provide housing assistance also. Service units give free bread, cake etc. Some units are providing retirement fund and yearly travel expenses. One particular unit is dedicated to the development of the girl child: after 4 hours of work, there are classes, sports etc. The unit also supports full boarding, maintenance and education of 7 girls. In fact, Aurovilians engaged in business practices are also participating in the development of society. In a nutshell these units are not only generating business but are also an institution.

### ***Training***

All the units are operating on the principles of 'On-the-job training'. Different crafts require different time periods to learn, these vary from 3 to 5 months in a garment unit, to 3 weeks of training in the appliqué unit. A leather entrepreneur claimed that to achieve dexterity in finished leather craft, more than 5 years of on-the-job training is required. However, one year of training is sufficient for soft leather work. For paper and flower based greeting cards in which flower pressing is a meticulous art, 2 months of experience may be required to learn sticking, followed by one or even two years of 'on-the-job training' to make a dexterous worker. In two cases only, a specialized training course was found for appliqué work. Namrita provides a 3 week training courses for college girls, Centre for scientific research (CSR) conducts training courses for masons and others. One of the problems some units are facing is that experienced local females leave the job after getting married but as expressed by female entrepreneurs; their goal is met if they continue to practice the lessons and self dependence they learned from their work experience.

### **Competition**

The manufacturing units at Auroville are facing competition at different scales. Depending on the type of product, type of industry and market coverage the competition is different. Basically the competition is of two types, price and plagiarism.

### ***Leather industries***

The units studied under this category in Auroville make a variety of items ranging from garments to footwear, bags to wallets and knickknacks. For footwear and leather garments, competition exists at the regional level but for accessories and gift items there is competition from villagers only. As one of the executives mentioned, within 3 years, there are number of players operating at a local level. Auroville units hold the edge only by virtue of the quality of its goods.

### ***Garment industries***

There were different points of view expressed by garment and cloth accessories units. The hand-painted silk garment export unit faces competition from Delhi as production costs are cheaper there. The cotton garment export unit is not facing any competition locally and within Auroville, as they have a select clientele for export. In the case of appliqué work, the product is unique and free of competition at any level. Hammock knitting unit, **Lotus**, is not facing any competition in the local and national market but in export is facing competition.

### ***Food processing industry***

The units studied in food processing are basically bakery and Jam-Jelly-Marmalade. Since they are service units and have been set up to serve the community, they are not facing any competition. Moreover, as the demand is greater than the supply, one more bakery came up a few years back.

### ***Wood based industry***

The types of units studied are making wooden toys, hammock reapers, wooden utensils etc. For wooden toys export, the unit was facing competition from Chinese products. For hammock reapers, at a local level, there was no competition as they had dedicated customers. The household utensils unit is facing competition from its old workers only and at a local level.

### ***Clay based industry***

In clay based industry, only potteries were studied and they are facing healthy competition. At a local level, the competition is less, as local potters cannot compete in range, variety, art and quality; moreover for quality pottery there is a large market in India and awareness is growing day by day. The supply is less than the demand, hence there is no competition at the national level either.

### ***Flower pressed greeting card***

The greeting cards in this unit are made by a specialized technique; hence they are not facing any competition. It is a meticulous art and so the unit faces less competition at a local and regional level. Moreover, they hold the edge by the range and the variety of their products.

### ***Electronic based industry***

The only unit studied under this category is a solar-based grid converter unit. The product is so specialized that apart from stray examples, it is not in use in India at present. In export they are not facing any competition as they have dedicated clients. But for Uninterrupted power supply (UPS), which is being made for the Indian market, they are facing competition.

### ***Other units***

There is only one unit in Auroville making incense and aroma of this type and in terms of quality of incense they are the leaders. However they have started facing competition at the national and international levels. They have problems of plagiarism also. The furniture renovation unit is facing competition from many units locally. The units in Pondicherry have also started exporting furniture, though the Auroville unit excels on account of its quality.

### **Innovation, Technology and Environmental consideration**

Amongst the cases studied, it is not that each unit is developing a new technology. Most of them are using old technology but the effort is towards using and evolving appropriate technology suitable for that area and environment.

In garment industries, crafts and processes used are conventional apart from appliqué unit which uses waste cloth pieces discarded by other garment industries as its raw material. Around 40% requirement of its raw material is fulfilled in this manner.

In the case of solar converters, it is basically a case of technology transfer from Germany. Some entrepreneurs have also experimented with imported tools and plan to improve the quality; for example, solar converter unit imports integrated circuits, Garment units use imported air brushes for painting and leather units use imported hand tools from America and Taiwan for designs on leather.

The technology may also be adapted, as in the pottery unit which is modifying the design of a Korean potter's wheel to suit its requirements.

The units attempt to use environmentally friendly techniques and research to achieve quality without the use of hazardous chemicals. In the garment unit, the cotton used is organically dyed and it is ensured that exported garment is ASO free (ASO is a particular dye which was banned in Germany because it is hazardous to the skin and unsafe for children). The attempt is being made in leather craft to use only lacquer for colouring, but till now they have been unsuccessful in achieving the same quality with lacquer. The preservatives used in Jam-jelly are organic, made from flowers and not chemicals and Aurovilians have been able to grow the required flowers successfully in Auroville.

Proper recycling of waste is also taken care of. For example, in the pottery unit, the kilns are fired at 1300 C rather than at 800 C. This is done in order to prevent the formation of unstabilized glass in the ash which may leach and contaminate the water table. As a precaution, the ash that is produced is used for spreading on roads rather than as fertilizer. Waste from the wood based industry is used for firing the ovens. There is little waste generated in the leather industry as even small pieces are used to make products and cuttings are sold to cobblers. Cloth waste is reused or sold for use as scrubbers for mechanics. All organic waste goes for composting. An agency Eco-service collects paper, etc., all possible recyclable material goes for recycling. Batteries and toxic material are separated and used in concrete block.

## **Aspirations and Plans for expansion**

Most of the executives expressed their desire to expand their units, not only in terms of gross production but also in terms of expanding their markets, imported technologies, training program, innovations etc.

The toy factory has plans for training and introduction of innovative techniques from Argentina. Lotus (Hammock unit) wants to import better knitting methods from South Africa. Maroma, a perfume-based unit, aspires to tap the Indian market. The solar converter unit wants to invent and manufacture best high quality machines. In some cases executives want to limit their production process and expressed that is only possible if workers are willing to participate. Other units would like to increase the benefits for their workers; the leather unit has plans to help its workers with housing.

Service units have no plans to expand, though the Jam-Jelly unit's market has expanded to Bangalore. Construction units aspire to import infrastructure and innovative techniques of building construction. One common theme of all of them was their desire to contribute more and more to Auroville, with the underlying thought that the product should be beautiful and sustainable.

### **Achievement of Auroville Industries**

- Self-reliance and Sustenance
- Benefit to the nation
- Auroville Product Image
- Environmental Management
- Inter-linkages, Esprit de corps and Collective Realisation
- Social Development
- Empowerment of Women
- Units as an Institution
- Programs and other benefits

Auroville has come a long way towards achieving self-sustainability since its genesis 30 years ago. The achievements of the Auroville industry are myriad and are enumerated below.

From practically nothing, the number of Auroville handicrafts and small-scale industries grew to 50 units after 25 years and to 80 after 30 years. They have multiplied into such diverse activities as candle and incense making, pottery, gemstone jewelry, wood and stone work, stationery, construction and architectural services, printing and graphic design, fish farming, cheese making, leather products, garments, electronics and computers.

### **Self-reliance and Sustenance**

By far, the most significant achievement of the Auroville industries is the ability of an individual to support himself and the strides it has taken to make Auroville self-supporting. Earlier, residents had no means of subsisting in Auroville which had led to a transmittal economy in which they had to work for a certain period in their respective countries in order to earn money and thereby survive in Auroville. This had forced Westerners to try and set up some enterprise so that they could stay with their family and gradually some of them have achieved a high degree of success.

The success of the units in Auroville has also led to the self-sustainability of the Auroville economy. If we can compare the grants and donations with the gross turnover of these units, it can be seen that since 1988, the growth rate of turnover of the units has been quite high. It varies from Rs. 150 lakh in 1988 to Rs. 880 lakhs in 1992 and to Rs. 1900 lakhs in 1997. The dependence on grants and donations has been reduced as the rate of growth of turnover and the profits increased, gradually exceeding that of grants and donation. This graph can also be interpolated before 1988 which shows that Auroville took 24 years from its inception to generate enough



funds to match the donations and grants. In 1995, the share of profits made by the units contributed 50% of the running expenses of Auroville.

The success of individual units can also be gauged from the fact that profits are also increasing in magnitude from around Rs. 38.42 lakh in 1988 to Rs. 218 lakh in 1992 to around Rs. 350 lakh in 1997.

### **Benefit to the nation**

In terms of monetary benefits, Auroville managed to bring in foreign exchange worth Rs. 10 crores, of which Rs. 6.5 crores was from the export earnings of the business units. It has also disseminated knowledge and technology gained after many years of applied research to Indian professionals and people through workshops, seminars and conferences.

### **Auroville Product Image**

The products of Auroville are synonymous with qualities like sheer excellence and craftsmanship, innovation and sensitivity towards environment. This has resulted in establishing a brand name for Auroville products and they have created a niche in today's competitive markets which future industries of Auroville can build upon.

### **Environmental Management**

One of the guiding principles of the Auroville experiment is that of sustainable development in all endeavours. A high consciousness of this principle is reflected in their approach. The Aurovilian units have succeeded in this with a fair amount of success.

In most of the industries studied, ways have been evolved in which to put the waste products to some use or other. In some industries, the waste from one unit forms part of the raw material for another, e.g. Aditi, an appliqué unit, 40% of whose raw material is sourced this way.

Maximizing the use of raw materials and minimizing waste is another feature of some units. For example, the leather workshop run by Venkatesh makes products varying from big carry bags to wallets and key chains. Similarly, it has been found that Shraddanjali, a greeting card unit, uses flowers from their own backyard as well as leaves and grasses from the neighbourhood.

Some industries have altered their production process to be sustainable; for example Angad fires his pottery at 1300C rather than 800C, just because, at the lower temperature, toxic lead compounds are produced while at 1300C, they are rendered harmless. All garment and cloth based industries either sell their waste pieces to workshops as scraps or use them for making handmade paper. Auroville also has an Ecoservice Unit, which collects all non-recyclable elements like glass, plastic etc and practically all the wastes are accounted for.

### **Inter-linkages, Esprit de corps and Collective Realisation**

Auroville units have succeeded in fostering linkages between themselves as is evident by the dependence of other units in their production process. For example Aureka, a metal workshop, carries out metal works for all units of Auroville at cost

price. In times of need, other units chip in with help and resources: Aditi may take help from Filaure in the form of an extra tailor or cloth in order to meet rush orders. Dara, the executive of Imagination, gives business orders to Veerapan, a fledging local entrepreneur in an attempt to help him.

The spirit of collective realization is also reflected in the relationships between the executive and the workers, which transcend the normal relationships in other cases inasmuch as the motivation for doing work is at the same level as that of the executive. As Martina of Le Gourmet or Abha of Shraddanjali put it, even in their absence the workers maintain the level of productivity.

### **Social Development**

The development of industries in Auroville has resulted in a metamorphosis of the economic conditions of the local inhabitants of the area. From mere foragers and collectors of food leading drab existences, they have been galvanized into productive action, learning skills and being gainfully employed. At present, almost 3000 villagers are employed in Auroville units. This has substantially raised the standard of living in the surrounding villages.

What was classified in 1984 as a backward area now boasts of hundreds of skilled masons, carpenters, craftsmen, clerks, tailors and businessmen.

The increase in material prosperity is very evident from the concrete houses, well-dressed and well-fed people, many shops and small production units, women on bicycles and mopeds. Auroville and its 13 surrounding villages seem like an island of prosperity amidst this backward part of Tamil Nadu.

One of the most significant outcomes has been the emergence of local entrepreneurs. In many instances, local villagers, having worked in Auroville industries, have developed the confidence to set up their own industries. A few cases in point are Venkatesh, who took over the leather unit set up by Bhavana [an American] and is doing well. So too is Kama who has his own garment industry and is the first locally born executive in Auroville. Similarly Sundaram, executive of Ganesh bakery, worked with Larry who was the pioneer in making bread and cakes in Auroville. He now innovates and makes different kinds of cakes, pies and buns and has his own unit.

### **Empowerment of Women**

There has been a marked tendency among many entrepreneurs in Auroville to employ only women. The reasons are many. Firstly, quite a few entrepreneurs feel that women are easier to work with and more sincere in their work. Also they tend to be more responsible and less of the trouble making sort. Therefore, for jobs which require nimble fingers such as embroidery or painting or montage, women are preferred. Also there have been entrepreneurs who prefer to take unmarried women as they feel that with financial independence the girls would be better equipped to face life.

### **Units as an Institution**

It has been found that certain industries have been created primarily to finance a social cause like the Toy factory and a Hammock making industry which funnels their

respective profits into the cause of the Health Centre and the girl child respectively. This way, not only are the social issues addressed through a long-term investment that gives recurring and increasing returns, but employment is also provided to the villagers.

### **Programs and other benefits**

Auroville industries make sure that their workers get salaries that are higher than those of their counterparts in other areas in its vicinity. Apart from the wages, they also have other benefits like free cycles, Provident Fund, maternity leave, paid leave, bonus during festivals and successful times health care etc. Auroville also encourages its workers to save for retirement and a Small Employers Welfare Administration (SEWA) retirement scheme has been set up. Under it, the savings are built up by contributions from the worker, employer and the compound interest. It also arranges the Accident insurance and is active in conflict resolution. The executive of Le Gourmet, in order to encourage mothers with newborn babies to breastfeed them, offers them 75% or 50% of the monthly income for every month's extension of leave in addition to the three month's paid maternity leave.

Apart from these, there are extracurricular activities like evening classes where General Knowledge, English, Electronics etc., are taught. A bi-annual picnic is organized for the workers by most of the entrepreneurs.

All these factors shows the genuine concern of the executives of various units for their respective workers, who in turn are highly motivated and give as much importance to the unit's growth as to their personal aspirations and ambitions.

## Chapter 5

### Failures

There have been some failures too in the economic development of Auroville, including that of cottage industries. Auroville's economy has not grown as it was envisaged in the beginning. Major areas in which it has failed to achieve success are:

- Self-sufficiency
- Contribution by industries
- Kind economy
- Lack of institutional support

### Self-sufficiency

In spite of growth of industries, Auroville is still not self-sufficient in many respects. One of the reasons stated is that population is too low to support self-sufficiency. Hence Auroville fulfils many of its requirements from the markets of Pondicherry.

### Contribution by industries

In the absence of adequate resident population, the industries that came up are basically manufacturer of goods and articles which are mostly sold outside and exported, thereby generating money from outside. Despite most of the industries being capital goods based and not services oriented, Auroville still depends on grants and donations.

### Kind economy

In spite of experimenting with an in-kind economy for many years, Auroville has still a long way to go in order to achieve success in the practice of an in-kind economy. Moreover self-sufficiency and practice of in-kind economy are so inextricably linked that one cannot be achieved without achieving the other.

### Lack of institutional support

Since the beginning, Auroville entrepreneurs have lacked financial support (banking etc.), strategic or technical support from Auroville as an institution. Everything depended on the individual entrepreneur, which is also a risk for a town aspiring to be self-sufficient. Similarly, all the liabilities are thrust on the entrepreneurs and he has to fend for himself in case of losses suffered.

### **Keys to the success of Auroville's Industries**

- Human Spirit
- Creativity and Innovation through R & D
- Quality
- Export Potential
- Legal Status of Aurovilians
- Goodwill from the local villagers
- Social Net for Workers

It is seen that after 30 years, Auroville has had a mixed bag of success and failures as far as the industrial units are concerned. Some are failures in the sense that only 25% of the units are making extremely good profits and 25% of the units are just struggling to make ends meet. However, if we dwell on the success stories of Auroville and the factors responsible for the same, the following aspects need to be emphasized.

#### **Human Spirit**

A common strand, which runs across all the units' stories, is the saga of individual spirit and quest for doing well and contributing to Auroville's success.

#### **Creativity and Innovation through R & D**

The experimental character of Auroville as a site of 'material and spiritual researches' which is embodied in the Charter of Auroville, has contributed in no uncertain measure to the innovations and environmental friendly processes of various products in Auroville.

Certain Auroville products are harbingers of innovation, which has led to their being plagiarized in the national market. Maroma, which have a worldwide clientele for its aromatic products, has reached this stage through sheer dint of research and innovations. Some products have discovered potential from wastes or ordinary organic matter that can be found in anybody's backyard like Aditi (Applique making) or Shraddanjali (Pressed flower cards) for that matter. Matthias of Altecs, worked in a German firm's R&D and developed a design for solar inverters which he transferred to Auroville and generated his own prototype.

#### **Quality**

This attribute has been the hallmark of all the products in Auroville, noted for their exquisite and quality products. Most of the entrepreneurs say that quality is the USP of their product and would not compromise on it at all, even if it means rewarding excellence or punishing sloppiness of the workers. Knowledge of the expected quality

of the product is again due to the background of the entrepreneurs by virtue of their having been brought up in western countries.

### **Export Potential**

More than  $\frac{3}{4}$  of the gross turnover of the industries are in the form of export sales. This has been rendered possible by the networking of Aurovilians with the markets in the west, mostly Europe and by knowing the potential existing in these markets for the kinds of products made. Thus, Auroville has over the years acquired a brand image of high quality, environmentally friendly products, which they exploit to the hilt.

### **Legal Status of Aurovilians**

Under the Auroville Foundation Act, which was ratified by India's Parliament, the Government of India is obliged to grant residential permits to Aurovilians, provided they live and work in Auroville as Honorary Voluntary Workers. Also all the commercial units come under trusts, which in turn come under the broad umbrella of the Auroville Foundation. Since all assets under the Auroville Foundation are income-tax exempt, no unit pays this form of tax. This coupled with the fact that most of the units are EOUS, they fall outside of the scope of sales tax. They pay sales tax only for what is sold in the Indian market. They are required to pay 33% of the unit's profits to the Auroville Foundation. These factors have ensured that money to a large extent remains within the Auroville community and the immediate region.

### **Goodwill from the local villagers**

Auroville enjoys tremendous goodwill with the local villagers. This is by no means a small feat and has resulted from a sea-change in the physical and mental makeup of the place and its people. One of the main reasons has been the social and economic benefits which have accrued from the massive afforestation program run by Auroville's pioneers. Secondly, the means of earning a livelihood, which was primitive in the pre-Aurovilian period, has metamorphosed into secondary and tertiary forms of livelihood like blue collared or white collared jobs. In addition, many businesses with the help or inspiration of Auroville, have sprung up in villages. This has led to a growing mutual understanding notwithstanding huge cultural differences. From Auroville's point of view, the villages represent a ready pool of labour that can be imparted with simple skills such as embroidery or soldering or something else that is required by Auroville's units. Above all, Auroville recognizes its interdependency with the local population and knows that in the long run, both the villagers and Auroville have to evolve together.

### **Social Net for Workers**

The various perks, salaries and post retirement benefits which an average worker in the industries gets, is one of the primary reasons for his/her satisfaction and motivation. The workers are also conscious of the fact that their boss cares for them and would like them to be part of the success. The appreciation of the local workers in what Auroville is doing may be one of the reasons why there have been few labour unrest problems.

### Lessons from Auroville

- Philosophical roots
- Framework and setup of Industries
- Regional resource
- Typology of industries
- Industries and Social development
- Marketing and Client relations
- Innovation and Research
- Environment
- Strengths
- Weaknesses

The success story of the industries of Auroville is a living inspiration for wannabe entrepreneurs. The Aurovilians are constantly using their creativity in realizing the teachings of Sri Aurobindo. This path breaking model of industrial development is rooted in spirituality.

The entrepreneurs are pursuing Auroville's vision to achieve a future of knowledge, peace unity, to make a place of joy liberating one from the need to have any personal possessions, to realize human unity and to move towards the world of peace, friendship, fraternity and unity. The emphasis of industrialization on sustainability, cleaner environment, reasonable exploitation of natural resources, achieving better human relations, are moving towards the realization of the aforesaid goals. Every industry in Auroville is working in pursuit of this vision in some way or another. They participate in human relations, invent environmentally friendly techniques of production or participate in social development, apart from earning money for Auroville. The experiences of Auroville are lessons, which are worth emulating and have been discussed below.

### Philosophical roots

#### ***Development of a vision***

A sound conceptual and philosophical base is needed for the development of industries. A conscious industry with a vision takes into account the indigenous people, the environment and the natural region around it. The development of a strong vision for industrial development, based on the philosophy and goals of the community is required. The vision should address the 'way of life' the community may adopt and the participation by the residents. For example, Auroville believes in Karmayoga, in which work is not a means for livelihood but a means of expressing

oneself. To be creative and conscious towards beauty, self-participation or joy of doing work by one's own hands is an Aurovilian's 'way of life'.

### ***Leadership***

There should be someone to hold the vision, who regularly reminds the participants and monitors them. Auroville is a very decentralized community. Aurovilians are quite independent in taking decisions in their chosen field of work but there are people who cherish, hold and recall the vision regularly. In an enterprise, the entrepreneur is expected to hold the vision and provide leadership, though workers may participate in decision making processes.

## **Framework and setup of Industries**

### ***Organizational structure***

There should be a fine balance between the freedom of and controls on an entrepreneur. Controls should not be such that it stifles the spirit of the entrepreneur. Freedom to do one's work is almost unlimited in Auroville. Auroville is a decentralized structure. The Auroville Charter gives the broad principles towards realization of the vision but there is no written constitution. Every participant is supposed to attune his/her consciousness as per the Charter. In spite of decentralized approach, still there is not even one cooperative. Enterprises are setup and run by people of entrepreneurial ability, who establish them and make them a success against all odds.

People having entrepreneurial ability, belonging to the community should be identified and encouraged and the organizational structure should be supportive of entrepreneurship.

### ***Legal status***

The legal status of Auroville Foundation, being tax-exempt by an Act of the Indian Parliament, has helped the industries to re-invest all their income back into Auroville. The status of Auroville Foundation is of national importance and industries operating as trusts have been helpful in achieving this.

### ***Institutional support***

Though in Auroville considerable autonomy exists for the entrepreneurs, there is an acute lack of institutional support which should guide as well as share some risks and losses. The need of an institutional support for the industrial development, which should provide management and strategic guidelines, was expressed. This support should be in the form of guidance and sharing of risks.

### ***Ownership rights***

Lack of ownership rights is in tune with the philosophy of Auroville. All immovable assets are the property of Auroville Foundation. No one can put claim on any building or land of Auroville. Thus the fixed assets are under Auroville's control.

## **Regional resource**

### ***Regional Linkages***

Auroville has the potential of being accessible to all major regional nodes and cities either by road or by rail. Accessibility by various modes is available and it is used by the industries of Auroville to procure raw materials as well as for export.



Strengthening of existing linkage and planning for the potential linkages will be help in the development of industries.

### ***Natural resources***

Ideally, raw material should be available within the immediate region of the industries. Most of the Auroville industries fulfil the raw material requirements from the surrounding region of around 300 km. Moreover they are studying the potential of resources in the region and the kinds of uses to which it can be put, so that the whole region can be made self-supporting. Resource-based studies for goods manufacturing can become the information for the setting up of new industries.

### **Typology of industries**

The experience of Auroville provides insight for sustainable development of industries. The development of industries should be a gradual process, keeping pace with the development of the community.

### ***Produce first what the community needs***

Aurovilians have expressed that ideally, identification of the genuine needs of the community and the attempt to satisfy those needs through production, should be the first priority. It is a step towards self-sufficiency and the community should have a reasonable size to support the service industries.

### ***Produce from what is available in the region***

The study of Auroville industries reveal that for sustainability, emphasis should be on making products which meet the needs of the visitors and the residents from the locally available raw materials found in the surrounding region only. It would be worthwhile to do a research for proper usage of the local resources for producing goods.

### ***Small is beautiful***

Aurovilian entrepreneurs feel that the scale of the industries, in terms of labour, production and capital input, should be small so that it is within the means of an aspiring entrepreneur and also can be managed by one person. It also ensures strict control over quality and production. Moreover, it generates personal and humane relationships between employer and employee, making the work place an arena for achieving greater brotherhood and collaboration.

### ***Backward and forward linkages***

Though at a small scale, backward and forward linkages may exist in rudimentary form, the emphasis should be on establishing industries in which output or waste from one industry becomes input or raw material for other industries. Elementary linkages were found within the Auroville industries. Groups of such industries should be identified, so that agglomerations can be suggested.

### ***Industries attached to a cause***

The Auroville experience has revealed that the industries can act as facilitators to a cause. Instead of providing regular grants, for functioning of social services, like the health center or an educational institution. a unit can be attached to it. The entire profits accruing to the unit can go towards running and maintaining the social service, so the burden on the town's financial management lessens. Moreover the unit will also generate much needed employment for local people.

### ***Industries with a purpose***

The study of Auroville industries show that manufacturing units can also be established as a support unit to a development scheme, for example, a unit is dedicated to Matrimandir and Green belt maintenance and afforestation, hence all profit is donated for that purpose. This way a business and manufacturing unit facilitates a developmental purpose.

### **Industries and Social development**

#### ***Image of the industries***

The image that emerges in the study of Auroville ads is not of a normal business and manufacturing enterprise, where efficiency is measured in terms of production, price quoted and the sales mark, but rather that of an institution. The vision and ambitions being very different from those of a normal business enterprise, every industry participates in some way or another in research, in innovation and in human development.

Human resource is an asset, not merely a means of production. Industries in Auroville participate directly or indirectly in the human development endeavour. This includes conducting language classes, instruction in health, hygiene and nutrition, and incentives for child education and child nutrition. Ensuring job security leads to social and economic security. This humane approach in taking care of the needs and problems of the workers has generated a magnificent local support for Auroville.

#### ***Empowerment of the weaker gender***

Afforestation, industrial development and employment of women, a socially and economically deprived section in Auroville, has helped in the development and empowerment of women in this region.

### **Marketing and Client relations**

#### ***Creation of a brand name***

Auroville products have become a brand name known for better quality, use of environmental friendly techniques and for aesthetic appeal. This is the 'unique selling proposition', of Auroville products with a huge market established in India and abroad. The creative and quality goods ensure a clientele, there is virtually no need for marketing these types of products.

#### ***Internal linkage***

##### ***(export market, local market, local institution)***

Industries in Auroville are operating under one umbrella, hence apart from certain linkage in production of goods, linkage is observed for marketing; for example, a unit having an export license helps other units to export through it. For local markets, they have a centralized shop, i.e. boutiques in Auroville and Pondicherry. An institution for export is not available to the Aurovilian entrepreneurs.

Since local crafts and tradition were not in existence, Auroville could not have any linkage with local institutions.

## **Innovation and Research**

Industries can act as a cradle for research. Auroville industries conduct research in manufacturing environmentally friendly products and improving the quality of products through sustainable means. In this endeavour, some of them have innovated appropriate technology suitable for the local environment. Being an experiment, there are failures also but partial success in certain types of industries has been achieved. The industries should be motivated to do research and be innovative.

## **Environment**

Environmental sensitivity and practice is a 'way of life' for Aurovilians. Each entrepreneur not only keeps an eye on the quality of his product but also traces the disposal of the waste, so that in disposal or in recycling, it may not harm the environment. In a few cases disposal of waste from a particular type of industry was found to be different from similar waste from another industry, as the former waste contained hazardous chemicals. Industries should be encouraged to keep watch on waste disposal and waste recycling.

## **Strengths**

Auroville located at a distance of 200 km, from Madras, enjoys relative proximity and good accessibility.

Other regional nodes Salem, Pondicherry, Coimbatore are also accessible to Auroville [by rail/road]

A philosophical vision to support Auroville's growth and development.

Resource base was a group of Westerners who were creative, pioneering and entrepreneurial.

A pool of labour was available as their occupation was primitive and included foraging for food.

Afforestation empowered the women folk, and they became available for handicraft industries.

Industries come under the Auroville Foundation, which is exempted from income tax.

As ordained in the Auroville Charter, no immovable property is in private ownership and every fixed asset is the property of Auroville.

The executive is the whole and soul of the unit and acts as manager, planner and strategist for the unit.

The executive are autonomous enough to take any decision for the unit apart from certain restrictions on fixed assets.

The boutiques in Auroville and Pondicherry display the articles.

Most of the executives being westerners, export market was established through their contacts.

Most of the units being export oriented there is no problem of getting paid on time.

A variety of products are made under one type of raw material, it ensures usage of waste and leftovers

The quality and perfection achieved, the variety offered and the design make every piece of handicraft a work of art.

In terms of the use of local raw material, reusing waste and recycling makes the process sustainable.

Auroville industries are labour intensive industries and consume little machine power and electrical energy

The units are sensitive towards the use of hazardous material and proper disposal of hazardous wastes and reuse and recycling of the waste products is done

Making quality products from materials which cost practically nothing and are locally available or from wastes.

Every executive tries to do research in his/her own capacity and innovative to bring forth new products of processes.

Being labour intensive, Auroville industries generate employment for the region, specially female employment.

Each industry acts as an institution by providing some guidance and teaching to its employees.

The industries being small scale there is assembly line but no division of labour, hence each worker knows the whole process.

Auroville enjoys an excellent local support.

### **Weaknesses**

Very few of the entrepreneur's had prior knowledge about the respective craft and trade, so they had to start from scratch.

Raw material available was clay, wood, grass, flowers, leaves etc.

No skills existed among the local populace.

No market existed in the beginning; being close to Pondicherry, a small number of visiting tourists were their clients.

The scale of industries and agglomeration is too small to have forward and backward linkages.

No outlet at the regional level.

Less effort by individual executives to tap the national market.

No effort in evolving a marketing strategy for Auroville products.

No strategy for advertisement of Auroville products

Very few industries follow any sales policy like 100% advance payment. There is lack of sales policy for the products.