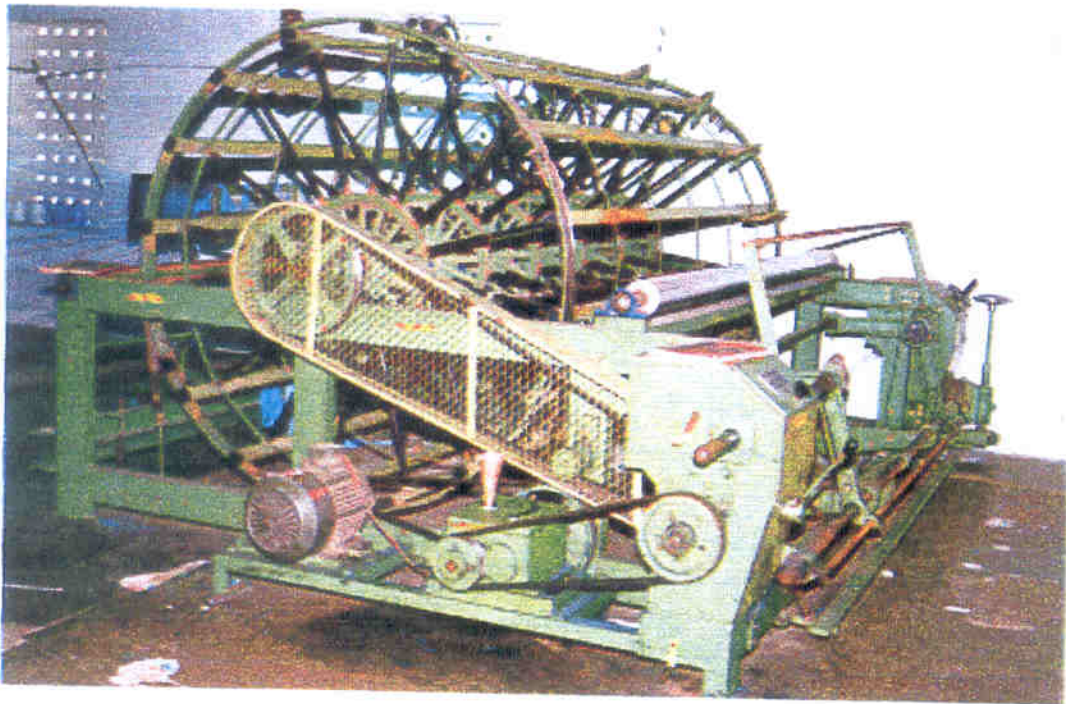


CHAPTER - 8



CHAPTER 8

Awareness on Modernisation and Upgradation of Technology

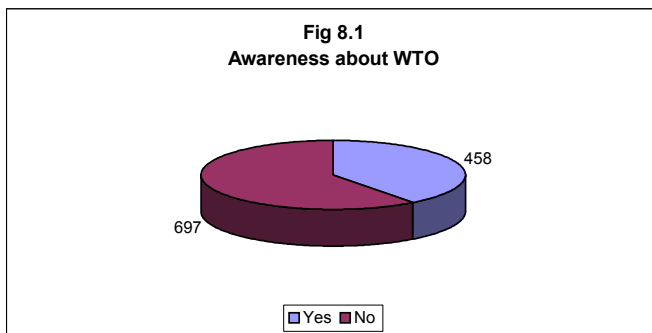
The powerloom sector produces only low and medium value products in grey fabrics, yarn dyed dress materials and bed/kitchen linen items. The loom technology level is awfully low as more than 90% of the looms are plain looms without auto stop motions for warp and weft as well as absence of positive let off motions. In order to move up in the value chain, the loom technology level has to be improved substantially along with forward and backward process improvements. In cotton textiles, the product diversification may be in the form of premium shirtings, cotton trouser materials as well as dress materials where the switch-over to the higher unit value fabrics can be taken up. All this will need major structural changes and technology upgradation that are to be achieved within as little time period as possible. In order to analyse the issues of modernisation, the respondents were asked to give their responses about their awareness on WTO - regime related changes in the global market, their perceptions regarding modernisation, plans for modernisation etc. and the findings are presented below which will help to arrive at solutions for quicker modernisation of the sector in the state.

The powerlooms in Tamilnadu are really an improved form of handlooms only. This is the reason for the dominance of plain looms in the state. The preparatory activities of dyeing, warping etc. have remained low technology activities. Therefore, it should be considered in the proper perspective. The functioning of handloom co-operative societies as well as the handloom master-weavers/manufacturers have been declining very fast and their profitability is disappearing due to the substitution of powerlooms production. It is now a well known fact that the number of sops being provided to the handloom sector are not resulting in desired achievements. Considering the need for replacing unviable handlooms by powerlooms, the approach of differentiating between handlooms and powerlooms in Tamilnadu should go. There should be total integration of handloom and powerloom activities in the private as well as in co-operatives, which will go a long way in improving the industry's health and fortunes. The existing marketing set up of Co-optex will thus be open for powerlooms that will be great advantage for powerlooms to avail of the network of marketing facilities.

As seen above, more than 90 percent of the looms are plain looms without any auto stop mechanisms for warp and weft break-ages. Irrespective of the type of fabrics produced, the machinery remains as simple as possible. The powerloom owner is able to produce check-varieties not only with drop box looms but also looms without drop boxes by resorting to manual practices for pirn changing. Even now it is a very common practice which results in less output and lower quality. The dobby and jacquard attachments are not of sophisticated types but of rudimentary ones that the weaver is forced to install in their looms.

8.1 Powerloom owner’s awareness regarding WTO Regime and its implications

The powerloom owners are not generally aware of the coming changes due to WTO regime and therefore they were asked to respond in this regard. It is observed that only 40% gave an affirmative reply regarding awareness of WTO regime to be in place fully by the beginning of the year 2005. The response for further queries relating to WTO regime and its understanding was also minimal. Nearly 60% of the units expressed the view that they were unaware about the implications of WTO regime.



The respondents were asked to confirm regarding their understanding of the competition in terms of price and quality that is going to increase in the domestic as well as export market as a result of WTO related procedures

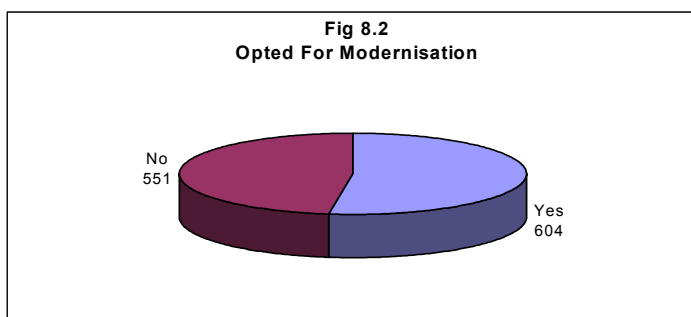
being implemented. Only 26% of the units gave a positive answer to the above. A majority of 74% confirmed that they do not understand the effects of WTO regime on the competition levels in domestic as well as export market that are going to be increased in terms of price and quality. The respondents were further asked to state whether they presumed that the present quality as well as price of their products were good enough to compete successfully in the global market even after the year 2004. Surprisingly enough, a majority of 68% of the units expressed view that the price and quality of the products were good enough even after 2004 to compete successfully. Only a small percentage of balance units had opined that their quality and price are not favourable for meeting the competition.

In this context, it may be mentioned here that even the Expert Committee report has indicated the same belief and stance of the powerloom sector in the following words :

“As long as the domestic market is concerned, it is cost conscious and demands are price elastic, powerloom operators find little reason to invest in modernisation or produce quality fabrics. A study recently conducted by the National Productivity Council on modernisation of powerlooms has observed that for at least next 2 decades, loom operators are not expecting any change in the market behaviour and confident to manage the situation with their traditional looms. The Committee views this smugness in the backdrop of ensuing globalisation of textile trade before 2005 with concern and considers it as a complete misreading or ignorance of the globalisation process or its likely impact “(Satyam Committee Report).

8.2 Modernisation plan of the powerloom units:

In order to judge the level of readiness for modernising their units among powerloom owners, they were asked whether they are having any plan to modernise and or increase the capacity of their units in the immediate future. Here again, more than 52% of



the units have confirmed that they have plans for modernizing the units, though the exact meaning of modernisation may be differing widely for each one of them. The balance 48 percent are not having

any interest in upgrading the technology level of the looms or putting up shuttleless and modern looms.

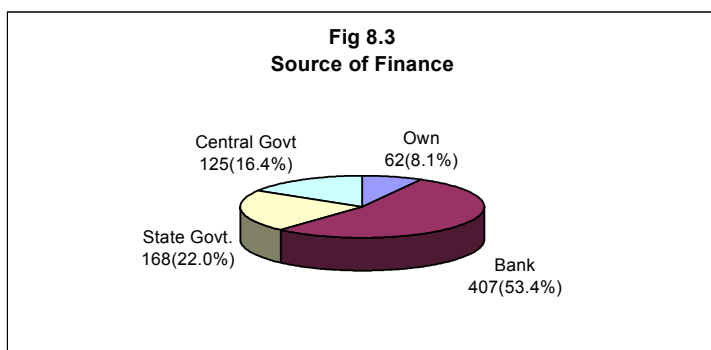
From among the 604 units having plans for modernisation, 597 have reported that they are thinking of upgrading their looms or modernising them. Around 30% of the above units have expressed that they would like to modernise their units with changes in the building/work-shed. The expected average minimum amount of investments for modernisation is Rs. 40,000 and the maximum amount is seen to be Rs.3 crores.

8.2.1 Time for completion of modernisation in the unit

The powerloom units desirous of taking up modernisation work were asked to indicate the period of completing the work. Accordingly, they indicated the possible period of modernising their units. Out of the total 604 units, nearly 16 % of them have given the period of completion as three months; another 22 % of the respondents have given the completion period as 4–6 months. Nearly 46 % of the units have reported the completion period to be above 6 months but less than one year. The units indicating the completion period as more than 12 months form about 17 % of the 604 units having modernisation plan.

8.2.2 Sources of finance for taking up upgradation/modernisation:

The powerlooms were asked to respond on the availability of their own resources for taking up the upgradation in the technology level and/or modernisation by putting up modern looms. In response, only 10% of the powerloom units from among the 604 units have stated that they have their own funds for taking up such modernisation. Not



surprisingly, 90% of the units have confirmed that they do not have any of their own resources to take up the upgradation/modernisation in their looms. As we have seen already, the powerloom units are

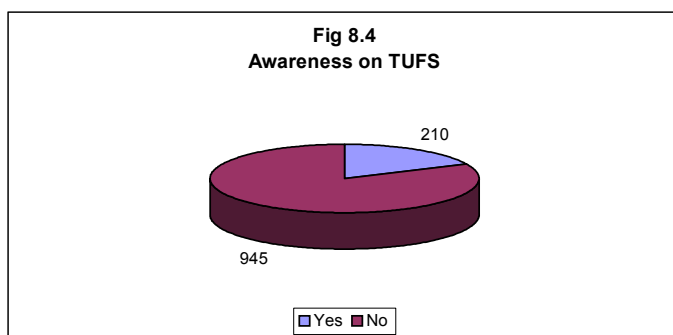
of small entities with limited resources even to meet their daily working capital requirements. Except a few, majority of the powerloom owners are doing job work for master weavers and therefore, they don't have any reserve funds to invest in their machinery; the investment as in handloom is kept to the barest minimum in machinery. Here again, the operational differences between the entrepreneurial as well as the job work units are seen to be substantial. Unlike the entrepreneurial units who market their own products and earn profits, the job work units are barely managing to survive with their conversion charges at competitive rates offered by the master weavers. Therefore, the majority of the powerloom units are not in a position to spare any resources of their own for modernisation. The small and job work oriented units are expecting greater assistance

from the government for their survival and not only for modernising their looms. In addition it is noteworthy to point to a fact about a nature of the small powerloom weavers. In many cases, the size is about 4 looms and with that the powerloom owner manages to earn a living. In case he is earning some extra money from his present powerlooms, his utmost priority relates to expanding the present small size of 4 looms to 8 or 12 looms which will necessitate less overheads or with the same existing overheads, the income will be increasing. It is understood that within Rs.15, 000, a second-hand loom can be purchased though without any individual motor. Even for upgrading a plain loom into semi-automatic loom, with electronic auto stop for warp and weft as well as positive let off motion attachment, the minimum requirement of the funds per loom works out to be more than Rs.15,000. Therefore, it is more attractive for the owners of smaller units to go for additional looms rather than upgrading them into semi-automatic looms. This major constraint on technology upgradation needs special attention for a solution.

8.3 Sources of institutional finance

Those who have stated that they depend upon institutional and government funding for modernisation form about 90% of the 604 units. Out of these units, 68% of them envisage of utilising bank loans to meet their requirements. It is interesting to note that about 28 percent of the respondents expect state government funding and 21 % through central government. As reflected from the above responses, the modernisation of powerlooms solely depends on institutional financing.

8.4 Awareness regarding TUF scheme:



Because of their tiny organisational structure as well as their dependence on job-work, the necessity and importance of upgrading the technology level and the induction of modern looms with higher technology levels is not

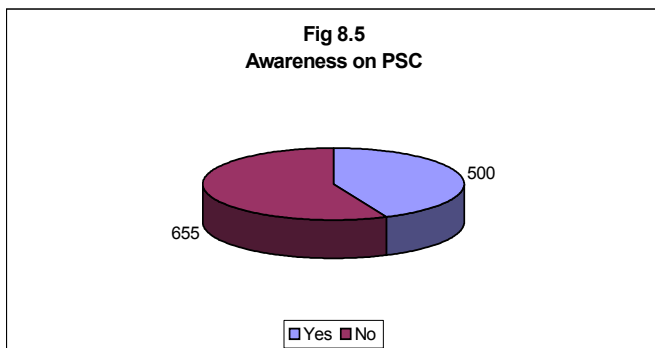
being realised fully by the powerloom units. Due to this reason, most of them have not heard about the TUF Scheme that is meant for every sector's upgradation and modernisation. Among the surveyed units, hardly a small portion of 18% units has given affirmative answer regarding awareness of TUF scheme. No unit has stated that they have

applied for loans for modernisation under the TUF scheme. Further, when asked to mention about the difficulties being faced in getting loans under TUF schemes, most of them were unable to give any answer due to their lack of knowledge of the TUF scheme.

8.5 Awareness regarding the services rendered by Powerloom Service

Centres (PSCs):

In Tamilnadu, SITRA is running powerloom service centres in many places that are



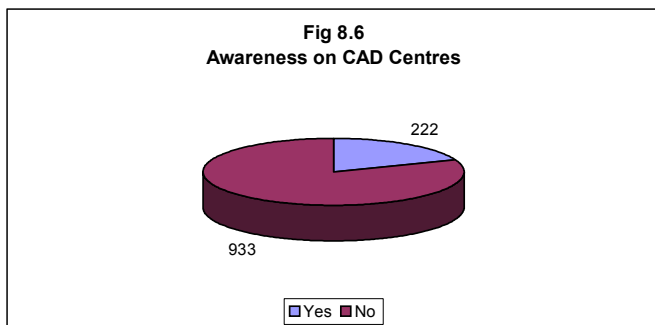
rendering a host of services to the powerlooms in their region. The PSCs of SITRA are operating from Somanur, Palladam, Karur and also Salem whereas PSCs of Textiles Commissioners' office is functioning in Erode. The PSCs are rendering the

following services:

Out of the 1155 units surveyed, as much as 43% of them have confirmed that they are aware of the services being rendered by PSC. Unfortunately, an overwhelming 57% unit have stated that they are not at all aware of PSCs and their services rendered by them. Out of the 500 units being aware of PSCs, 34% of them have confirmed that they have availed the services rendered by the PSCs. Further, from among these units, 63% of them have availed testing services and another 37% of them have availed the training services from PSCs.

8.6 Awareness regarding the services rendered by Computer Aided Design

Centres

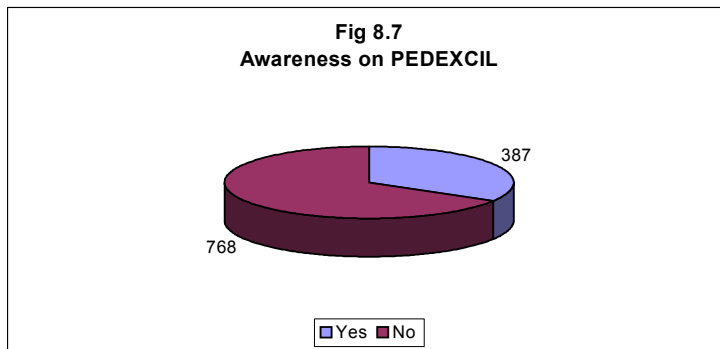


Realizing the importance of computer aided designs; CAD centres have been put up by the different organisations in the powerloom sector. In some cases,

the CAD centres are operating from powerloom service centres of SITRA and also other organisations independently. Design plays an important role in the powerloom sector as

many of the products need design inputs and their market depends upon the designs they produce on daily basis. The export market is solely dependent on the flexibility and adaptability of the powerloom sector to produce millions of designs in smaller quantities. Therefore, CAD centres are a boon to the powerloom sector. In spite of the above fact, only 19% of the 1155 units have stated that they are aware of the CAD centres and their services. A majority of the 81% units are not aware of functioning of CAD centres. This speaks volumes for improving the awareness and utility of such CAD centres in each and every powerloom cluster in the state that will go a long way in product improvement and diversification.

8.7 Awareness regarding the services rendered by PDEXCIL



The PDEXCIL plays an important role in the development of powerloom sector in the country as a whole and as also in the important state like Tamil Nadu. It has its office in Erode and also it has

become very active rendering different services to the powerloom owners. It is giving training as well as testing services in addition to other developmental activities. Normally, one would expect each and every powerloom owner to be aware of the PDEXCIL but contrary to this expectation only 34% of the units have confirmed that they are aware of the organisation. From among these confirming units, only 10% of them have stated that they have availed one or other kind of services from PDEXCIL. It is gathered further that almost 90% of the surveyed units have no connection with PDEXCIL. Only when a 100% awareness as well as utilization of services by all the units is established, it will be considered to be effective. Among the units that have availed the services of **PDEXCIL** a majority of the 63% have stated that they have availed their training services. The balance 37% has stated to utilise the testing services provided by **PDEXCIL**.

Table No. : 8.1
Awareness Details

| Sr. No. | WTO Regime and Implications | Percentage of respondents | |
|---------|--|---------------------------|----|
| | | Yes | No |
| 1 | Are you aware of WTO? | 40 | 60 |
| 2 | If yes, are you aware of its implications? | 60 | 40 |
| 2 | Are you aware that competition in terms of price & quality is going to increase in the domestic as well as export market as a result of WTO policy implementation? | 26 | 74 |
| 3 | Is the present quality/ price of your products good enough to compete in the global market (after 2004)? | 68 | 32 |
| 4 | Do you plan to modernise / increase capacity of your unit? | 52 | 48 |

| Sr. No. | Modernisation Issues | Percentage of respondents | |
|---------|---|---------------------------|----|
| | | Yes | No |
| 1 | Do you plan to acquire new machinery? | 52 | 48 |
| 2 | Do you plan to construct new building / shed? | 30 | 70 |

| Sr. No. | TUF Scheme | Percentage of respondents | |
|---------|---------------------------------------|---------------------------|----|
| | | Yes | No |
| 1 | Are you aware of TUFs? | 18 | 82 |
| 2 | Have you applied for loan under TUFs? | | |
| 3 | If yes, difficulties faced | | |

8.8 Modernisation issues

The powerloom units are widely dispersed and located in hundreds of semi urban and rural areas in the state. It is next to impossible to list out all the villages where the powerlooms are installed in tiny and cottage units. This wide dispersal and spread is unique to Tamilnadu alone. This may be perceived as an advantage for modernisation of the sector in Tamilnadu. The space constraint is absent for the units and entry of new units is easier and existing units can easily expand by acquiring additional space at lesser cost. The looms are located in sheds put up in agricultural lands.

Yet another aspect of the powerloom sector is that in certain areas, specialisation on specific products is adopted. In Coimbatore cluster, it is grey fabrics that are being

produced in more than 1.35 lakh looms. This facilitates sizing units required for grey cloth. This area-specific specialisation provides certain advantages for process improvement through modernisation. The technology upgradation/ modernisation of looms should be linked to the product group of the given cluster area and action plan should be made. The modernisation of pre-weaving processes/machinery will thus be in tune with the process requirements for the product groups. In the case of furnishings/ made-ups in Karur cluster meant for export and domestic market, the wider width fabrics and the dyed yarns are the basic requirements. Wider width fabrics are the product diversification in export market. In domestic market, generally the preference is moving towards wider width fabrics that should be addressed to. Tamilnadu requires a different strategic approach for upgradation/modernisation of its powerlooms. The introduction of shuttleless looms will be achieved only by a slow and gradual process and not in the short run. Modernisation is definitely the need of the hour for the powerlooms.

The growth of powerlooms in Tamilnadu is comparatively at a faster pace than its counterparts during the last two decades. This unaided growth of tiny and small unviable units is not conducive for the health of the sector.

8.9 Issues relating to modernisation of looms

The Expert Committee refers to the phenomenal growth of the powerloom production in volumes rather than in quality. It is stated in the report “Though there is a quantum jump in the production of cloth by the powerloom sector over a period of time, the quality of cloth leaves a lot to be desired. There has been almost no technology upgradation in the powerloom sector over the last 40 years. Though precise data regarding the level of technology and different types of looms installed is not available, it is estimated that only about 3000 shuttleless looms including a substantial number of second ones are installed in powerloom sector”.

In the context of Tamilnadu powerloom sector, the technology upgradation of looms and their modernisation may involve the following:

- (i) Upgrading the plain looms into semi automatic looms by providing the auto stop motions for warp and weft as well as positive let off mechanism.

- (ii) Replacing the plain looms with semi automatic looms. This will be possible by discarding obsolete looms and also looms with width less than 140 cms (less than 54 inches).
- (iii) Installation of shuttleless looms as replacement to old looms or as expansion to existing unit.

8.9.1 Problems relating to upgradation of technology level of plain looms into semi automatic looms :

The average cost of upgradation by means of adding auto stop mechanisms for warp and weft as well as positive let off mechanisms in Tamilnadu powerloom sector is stated to be Rs.15, 000. Out of this, the electronic warp-weft stop mechanisms are stated to cost a minimum of Rs.5000 and the major chunk of upgradation cost of Rs.10, 000 is needed for the positive let off mechanism. As seen from the survey findings, the upgradation of technology level from plain loom to semi automatic stage is fraught with many obstacles and problems that are as indicated below:

8.9.2 Lack of capital to invest in upgradation by majority of powerloom operators in the state:

It is evident from the data provided above that majority of the units are tiny and small working on job orders from master weavers. They are not having enough working capital even for meeting the running costs of power, wages to worker etc. Therefore, the additional investment of Rs.15000 per loom for upgradation is not available fully or partly with the powerloom operators. Secondly, even if they have some amount of funds as savings/additional investment, this will be utilised for the expansion of loom capacity only. The reason is not far to seek as the present cost of second hand looms is near about Rs.15000 only. This loom will be without any individual motor and therefore will be run on shaft from the existing single motor. Even if a brand new loom is desired to be installed for expansion, the new loom cost will not exceed Rs.30000 per loom (without involving any cost for motor). Therefore, the small powerloom operators are tempted to invest their savings on additional plain looms and not upgradation. This kind of lateral expansion is more evident in areas like Somanur and nearby grey cloth producing areas.

8.9.3 State Government subsidy scheme for upgradation

The state government has initiated a scheme for providing subsidy to the extent of Rs.2000 per loom or 20 percent of the cost whichever is less. This scheme is restricted to powerloom operators owning one or two looms and not for those with more than two looms. Even if the small owners come forward to avail of this subsidy, so far the implementation of the subsidy scheme has not been given effect to. Recently the state government is set to have prepared a plan to announce the increase in the subsidy making it Rs.5000 per loom for upgradation by installing the two auto stop warp-weft mechanisms. As the scheme is not applicable to a majority of powerloom owners, there will be no major impact on the looms.

8.9.4 Demand for permitting the upgradation by the addition of only two auto stop mechanisms and not three additional mechanisms

Under the TUF scheme, funds can be obtained on loan for upgradation of plain looms into semi automatic looms. The three mechanisms that are necessary/required to be added for eligibility under TUF scheme are (i) Electronic weft stop arrangement, (ii) Electro-mechanical warp stop arrangement and (iii) Positive let off mechanism.

The powerloom operators are unanimous in their demand that the loan under TUFs should be made available even for two additional mechanisms of auto warp and weft stop mechanisms and the requirement for positive let off motion mechanism may be waived. In their view, the quality of fabrics can be maintained even without positive let off motion and, therefore, loan facility under TUFs should be eligible for even two additional mechanisms. The reason for not wanting to install positive let off mechanism may be the additional space of about two feet for each loom that is required for that positive let off machine part. We have already stated above that the looms are put up in sheds adjacent to residences/along with residences and the space is very limited within the loom shed. The space existing at present between two looms is hardly enough to allow a weaver to pass through comfortably and no extra space is observed to be available in the loom shed. Due to this reason, no loom operator is willing to go for the installation of the additional mechanism of the positive let off motion. Further the provision of shaft and belt drive systems below the floor level cannot be changed and, therefore, the space also cannot be

created for the positive let off motion. Realising the above difficulties of the powerloom operators and on the basis of various representations from powerloom associations the Government of Tamilnadu it seems, has accepted their plea to permit subsidy for only two additional auto stop mechanisms ie., warp and weft stop motions.

It may be worth mentioning here that most of the plain and semi automatic looms are being run with common motor for the entire unit of 4 / 8 / 12 / 24 looms by connecting them through shaft and belt systems. The looms are run by the shaft belt system laid below the ground level. Due to this absence of individual motors for each loom, the cost of loom is greatly reduced for marginal additions without incurring larger investments; the weaver is able to add up the number of looms under his control. Therefore the powerloom owner has shown more interest in expanding the size of the unit at a minimal cost rather than investing in improving the technology level. This attitude and approach has been prevailing for the past few decades, which has resulted in exponential growth of the powerlooms.

The size of most of the factories are of 16 feet x 42 feet for 8 looms, 16 feet x 64 feet for 12 looms; the space is not sufficient to accommodate positive let off motion which needs addition of 2 feet for each loom. Hence, the industry felt that the TUFs may be further liberalised to give loan for warp stop motion and weft stop motion alone without insisting on positive let off motion.

8.9.5 Wider width looms

Almost all the looms in the sector are smaller width looms and only a few thousand looms are more than 90 inches. In order to achieve quality production at economic costs, the loom should be preferably wider width. A major portion of the powerlooms engaged in the manufacture of towels, napkins etc. are of narrow width looms that are to be discarded and wider width looms should be increased. However, the weavers are reluctant to go for replacing the narrow width looms. Some of these weavers are putting forth a demand to make the narrow width looms eligible for upgradation loan under TUFs. The reason for unwillingness to discard narrow width looms is the absence of resources for tiny weavers. Therefore, only with attractive compensations, the narrow width looms can be removed. This is specific to Chennimalai and some other places in Erode cluster. As the majority of

looms are in the range of 54-60 inches, the replacement of such looms with wider width looms calls for major efforts.

Presently, only 5% of the looms are seen to be of more than 120 inches whereas the market is increasingly growing for wider width fabrics only. Due to this factor, there is greater urgency to go for wider width looms by replacing/discarding the existing looms of 48 inches to 90 inches. At the present juncture, the job work units may not come forward for scrapping their working looms and go for wider width looms.

8.9.6 Preference for shuttleless looms over automatic looms

It is also observed that for additional looms as expansion/ replacement of old looms, the weavers are more in favour of shuttleless looms rather than automatic looms. Automatic looms are not manufactured in India and even if they are available, the cost is not less than Rs.6 lakh per loom. Therefore, the units are going for shuttleless looms. They are wider width looms and therefore preferred as replacement for narrow width looms. The production capacity is four times more than the auto looms in grey fabric production. Therefore it is preferred in areas like Somanur, Palladam etc. and also in other clusters of Erode and Salem. In case of yarn dyed fabrics, there is a possibility for the weavers to go for rapier looms that are more versatile and cost effective. The availability of second hand shuttleless looms in the price range of Rs.5 lakhs to Rs.15 lakhs has been another reason for the weavers' preference for projectile looms.
