

**INTERNATIONAL TROPICAL TIMBER ORGANIZATION
(ITTO)**

SURVEY TOUR REPORT

**UPGRADING PRODUCTION EFFICIENCY IN FURNITURE
MANUFACTURING**

PPD.7/96 Rev.1(I)

Prepared by

MYANMA TIMBER ENTERPRISE

The Survey Tour Group

(September 1997)

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ABBREVIATIONS AND ACRONYMS

ASEAN	Association of South East Asian Nations
BS	British Standards
CIF	Cost Insurance & Freight
FRIM	Forest Research Institute Malaysia
ISO	International Standards Organization.
ITTO	International Tropical Timber Organization
JIT	Just in Time
KD	Knock Down
KVA	Kilo Volts Ampere
MDF	Medium Density Fibreboard
MRA	Malaysian Retailer's Association.
MS	Malaysian Standards
MTC	Malaysian Timber Council
MTIB	Malaysian Timber Industry Board
RM	Malaysian Ringit
SMI	Small and Medium Scale Industries.
US\$	United States Dollar
USA	United States of America.

CHAPTER 1

1. Introduction

1.1. With the concurrence of International Tropical Timber Organisation (ITTO), a study group of (8) persons engaged in pre-project planning and co-ordination were assigned to Malaysia and Thailand to study furniture production, marketing practices, distribution channels and market situation. They are also assigned to visit research institutions to acquaint themselves with international standards, wood preservation and treatment techniques.

1.2. Such a visit would enhance their knowledge in manufacturing and marketing of high quality finished products, give them an understanding of pricing and production cost analysis that is being adopted by foreign companies. They are also expected to put into practical application in Myanmar, as far as possible, what they have learnt during their overseas tour.

1.3. The need for such a survey tour was originally conceived in the pre-project document. The pre-project activities started with the employment of experts for the analysis of existing production and marketing systems, to be followed by a survey tour of personnel from the Myanma Timber Enterprise to Malaysia and Thailand.

List of Personnel in the Tour Group.

<u>Sr.</u>	<u>Name/Designation</u>	<u>Duty Assigned in the Pre-project</u>
1.	U Wai Lin Aung Deputy General Manager	Project Manager
2.	U Myo Myint Aung Assistant General Manager Furniture Factory Complex	Production Counterpart

<u>Sr.</u>	<u>Name/Designation</u>	<u>Duty Assigned in the Pre-project</u>
3.	U Tin Kyi Manager No.(5) Furniture Factory	Marketing Counterpart
4.	U Myint Soe Thein Assistant Manager (Architect) No.(1) Furniture Factory	Co-ordinator
5.	U Win Zaw Assistant Manager No.(6) Saw Mill	Co-ordinator
6.	U Tin Maung Swe Assistant General Manager No.(9) Saw Mill	Secretary Project Central Co-ordination Committee
7.	Daw Yi Yi Tun Manager (Finance)	Member Project Central Co-ordination Committee
8.	Daw Nwe Nwe Aung Assistant Manager (Computer) Export Marketing Department	Staff Officer

1.4. The above group left Yangon on the 30th July 1997 on a study tour to Malaysia and Thailand.

CHAPTER 2**2. Itinerary of the Study Group.**

<u>Date</u>	<u>Itinerary</u>
30-7-97	Left Yangon for Kuala Lumpur
31-7-97	Visited IKEA Furniture Show Room
1-8-97	Visited Malaysia Timber Council(MTC) Visited Malaysia Timber Industry Board (MTIB)
2-8-97	Visited antique furniture showrooms in Malacca.
3-8-97	Visited furniture showrooms in Genting Highland and KL.
4-8-97	Visited Forest Research Institute of Malaysia (FRIM). Visited Limbung Plus Sdn. Bhd. Furniture Factory.
5-8-97	Visited SMI Show Case 1997 Temperate Wood Sdn. Bhd. Diligent Profile Wood Working Tools Factory.
6-8-97	Visited Good View Timber Industry
7-8-97	ASEAN East Asian Economic Forum.
8-8-97	Left Kuala Lumpur for Thailand.
9-8-97	Visited OK Wood Products Co. Ltd.
10-8-97	Recapitulation
11-8-97	Visited Dee Sawat Industries Co. Ltd.
12-8-97	Visited furniture show rooms in Thailand.
13-8-97	Visited furniture show rooms in Thailand.
14-8-97	Visited furniture show rooms at Mall shopping centre.
15-8-97	Visited Union Industrial Development Co. Ltd Novaline Show Room Para Wood Furniture Show Room
16-8-97	Visited G Plan Limited. Sun Cabinet Co. Ltd. Sun Para Tech Co. Ltd. Sun Wood Industries Co. Ltd. Santi Forestry Saw Mill
17-8-97	Visited furniture showrooms in departmental stores
18-8-97	Left Bangkok for Yangon.

CHAPTER 3

3. Factories and show rooms visited by the study group in Malaysia

3.1. IKEA Furniture Show Room

3.1.1. The show room on the first floor displays a wide range of furniture items especially designs from Sweden, as well as designs from other countries including Malaysia.

3.1.2. The basement floor is a market hall occupied with kitchen wares, souvenirs, fabrics, flower pots and plants, screens, table wares, household accessories and small furniture.

3.1.3. Every commodity has a price tag showing dimensions, product name, type of timber, colour, weight and type of finishing.

3.1.4 For the convenience of the buyers IKEA provides:-

- (a) home delivery service at a minimal cost
- (b) home assembly service at a reasonable price
- (c) in case of dissatisfaction, IKEA will exchange the purchased product or give a full refund, under the IKEA No-nonsense Return Policy
- (d) IKEA also helps and advise home furnishings and kitchen designs free of charge
- (e) IKEA furniture is attached with the "Mobelfakta" seal of approval by the Swedish Furniture Institute Research.

3.1.5. In ensuring the customer's rights and retailer's obligations the code of practice for using scanners by the retailers at every check point for sales have been practised. All complaints against retailers for breaches of the code should first be directed to the store manager. If satisfaction is not obtained, complaints can be sent to Malaysian Retailers Association (MRA).

3.2. Malaysian Timber Council (MTC)

3.2.1 The tour group visited Malaysian Timber Council (MTC) on 1-8-97 and met with MTC personal who briefed the tour group on various aspects relating to their respective organisation. The visit was arranged by the pre-project Marketing Consultant, Mr. Ser Cheng Sam.

3.3. Malaysian Timber Industry Board (MTIB)

3.3.1 The tour group visited MTIB and met with officials who briefed them on the Marketing, Development, and Operations Divisions of the MTIB. The MTIB's functions are noteworthy and a similar organisation in Myanmar could help in regulating and co-ordinating the export of forest products.

3.4. Forest Research Institute of Malaysia (FRIM)

3.4.1. The tour group accompanied by Mr. Ser Cheng Sam, the Marketing Consultant for PPD7/96/Rev.1(I), visited Forest Research Institute Malaysia (FRIM) and met with persons who briefed them on facts relating to their Institute, especially on standards, kiln drying schedules, and preservation techniques.

3.4.2. The most impressive activity encountered by the study group was the fire testing laboratory. This laboratory has been conducting tests not only on wooden doors used in commercial buildings, but also for other building components, such as panels, brick work etc.

3.4.3. Furniture testing machines include, static testing machines, fatigue testing machines, impact testing machines, durability testing machines, scratch tests, abrasive tests, etc.

3.4.4. Furniture testing is conducted according to norms, rules and regulations of internationally recognised, Malaysian Standards (MS), British Standards (BS-4875 and BS 5459) and International Standard Organisation (ISO)

3.4.5. FRIM's research and development activities such as, rubber wood furniture processing is one area of great interest to the survey group. Myanmar also needs to act in this area in order to maintain international standards in furniture manufacture and to promote the utilisation of LKS.

3.5. Limbang Plus Sdn. Bhd. Furniture Factory

3.5.1. The tour group visited Limbung Plus Furniture Factory. The factory manager gave an introductory presentation and conducted the group around the factory.

3.5.2. The factory purchases only kiln dried timber and produces chair components (seats, legs) only. Raw material consumption is 200 tons of rubber wood and 50 tons of Nyatoh per month. 80% of the production (about six to seven containers per month) goes to the export market.

3.6. ASEAN SMI Show Case 1997

3.6.1. The study group visited "ASEAN SMI Show Case 1997" at Putra World Trade Centre. SMI Show Case 1997 is intended to achieve investment opportunities in the bilateral development of small and medium scale industries in ASEAN countries.

3.6.2. The group observed exhibits of electronic appliances, construction materials, computers, public communications and other related accessories. There is only one wood furniture display booth and modern sofa furniture show room.

3.7. Temperate Wood Sdn Bhd.

3.7.1. The tour group visited Temperate Wood Furniture factory. The factory manager explained matters relating to the factory, and then led the group around the factory. About(200) tons of finger jointed lamination for table tops and stair case are produced per month. There are kiln drying facilities. Raw material used is mainly rubber wood, and imported oak, pine, ash, elm, and larch.

3.8. Diligent Profile Wood Working Tools Factory

3.8.1. The tour group visited Diligent Profile Wood Working Tools Factory. It is a small factory, about 15' x 40', equipped with mostly machines from Taiwan. The machines and apparatus include lathe machines, milling machines, universal tool grinders, balancing machine, brazing machine, oxygen and acetylene gas containers. It was learnt that purchaser can place orders by giving detailed drawings and specifications of the required tool. No such factory exists in Myanmar.

3.9. Good View Timber Industry

3.9.1. The tour group visited Good View Timber Industry Sdn. Bhd. The factory manager gave a short introduction and the study group was taken around the factory. The factory produces chair components (chair seats, front legs, back rests). This factory ships about (20,000) numbers of chair seats and (60,000) numbers of back rests and front legs per month. Raw material consumption is 300 to 400 tons of kiln dried rubber wood per month, which is purchased at RM 920 to 960 per ton. Ships to Taiwan and USA.

3.9.2. Chair components (front legs) are produced by copying lathes. These copying lathes are enclosed types to prevent dust and any accidental hazard

during operation. A worker can operate two copying lathes simultaneously, each producing (4) legs at a time. Twin shapers are also used very effectively in this factory.

3.10. The study tour group left Malaysia for Thailand on 8-8-97.

CHAPTER 4

4. Factories and show rooms visited by the study group in Thailand

4.1. OK Wood Products Co. Ltd.

4.1.1. The tour group visited OK Wood Products Co. Ltd., at Bangpo. Produces dining sets, garden furniture, mosaic and souvenirs. Raw material used is rubber wood from Thailand, teak imported from Myanmar, ash, cherry, white oak, pine imported from USA, pine from Laos, and beech from Europe. 80% of production is for export. 30% of the exports go to USA, Australia, New Zealand in (4) forty foot containers per month.

4.1.2. OK Wood Product produces furniture as well as imported finished beech chairs from Italy, Czechoslovakia and distributes them in Thailand.

4.1.3. The offcuts from the factory are processed into souvenirs by laser curving, in order to trim down the waste. The waste minimising techniques employed by this factory is remarkable.

4.2. Dee Sawat Industries Co., Ltd.

4.2.1. The tour group visited Dee Sawat Industries Co. Ltd., at Cheng Wattana. Dee Sawat produces decoratively curved panel doors, various types of parquet blocks, teak and padauk furniture. Raw material consumption is (100 to 150) tons

per month of teak, padauk, and pyinkado, imported from Myanmar; white oak, red oak, poplar from USA. This industry uses various species of tropical and boreal timber.

4.2.2. A large percentage (about 80%) of the product goes to the local market. Production is highly capital intensive, with large sum of money invested in sophisticated woodworking machinery. This company ships about (6) to (7) containers of furniture and parquet per month. They also provide a warehouse to house a wide selection of unfinished items ready for final touches upon the client's request.

4.2.3. Dee Sawat prefers a diversified market rather than concentrate on a particular foreign market. To penetrate a market, a chair which is being sold in Japan at US \$ 100, would be sold in Italy for US \$ 90 to 95 for example.

4.3. Union Industrial Development Co. Ltd.

4.3.1. The tour group visited Union Industrial Development Co., Ltd., (Para Wood Industries) in Chonburi. The group was shown around the factory. Union Industrial Development Co. Ltd., is a joint partnership constituting 61% Thai and 39% American ownership. Para Wood is said to be the first factory in Thailand to process rubber wood furniture on a large industrial scale. It consists of one large factory and ten 20x50 meter small factories.

4.3.2. Rubber wood chairs for export are produced on the "Just In Time" (JIT) system using continuous conveyor line passing through assembly, finishing, and packaging stages resulting in the process of (3) chairs per minute.

4.3.3. Required components for JIT process are stored in advance for its ready use. Fifty percent of components was processed within the factory and the rest supplied by cottage industries.

- 4.3.4. This factory obtains kiln dried rubber wood from outside suppliers.
- 4.3.5. Besides the large chair assembly plant, it consists of (10) smaller 20x50 meter factories. System of management is to assign one independent supervisor to 20 to 30 workers to achieve a better co-operation and effective management. These smaller factories produce doors, sofa cushions, furniture, decorative glass, glass panels, finishing etc.-
- 4.3.6. The most impressive product encountered was the construction of high class decorative ARTGLAS panel doors, manufactured with modern technology transfer from USA.
- 4.3.7. Every piece of timber is selected to meet a high standard quality. The timber is then processed and assembled by skilled and experienced carpenters into 12 design series of entry doors, and are fitted with decorative ARTGLAS panels.
- 4.3.8. ARTGLAS panel is a three layer glass which is constructed with a sealant tape around the decorative panel and then sandwiched between two pieces of tempered glass. The decorative panel is composed of a large variety of designs by small pieces of textured glass and brass coming. The three layers of glass are finally processed through an insulation process.
- 4.3.9. Three advantages of ARTGLAS doors are :-
- (a) the space between the tempered glass acts as resistance to heat or cold transfer.
 - (b) it also acts as a sound barrier.
 - (c) tempered glass provides high shock resistance quality.
- 4.3.10. These (12) series of ARTGLAS decorative doors are exported especially to USA and also distributed in the Thai market.

4.4. Novaline Show Room

4.4.1. The tour group visited Novaline Show Room in Central City Bangna Store. Novaline Show Room is the subsidiary of Union Industrial Development Co., Ltd. It displays 12 styles of unique high class decorative ARTGLAS panel doors.

- (a) Montana collection
- (b) Inspiration collection
- (c) Somerset collection
- (d) Victorian collection
- (e) Crown collection
- (f) Creston collection
- (g) Pearl collection
- (h) Boulevard collection
- (i) Heritage collection
- (j) Monterey collection
- (k) Westminster collection
- (l) Imperial collection

4.4.2. Price, dimensions, timber species of product, glazing, decorative moulding are also specified.

4.4.3. Novaline also offers particular door designs to fit into specific homes and provide on-site assembly. Choice of modern hardware such as hinges, door handles are also available.

4.5. Parawood Furniture Show Room

4.5.1. The study group visited the Parawood Furniture Show Room in Seacon Square Bangkok. The showroom is 2000 meters square and displays:-

- (a) living room furniture
- (b) dining room furniture
- (c) kitchen room furniture
- (d) bed room furniture
- (e) office furniture
- (f) miscellaneous items such as table wares, kitchen wares, flower pots ,
vases etc.

4.5.2. To catch the eye of the customers, different products such as wood, metal and rattan furniture are exhibited in a 'mix and match' arrangement to obtain harmony in colour.

4.5.3. The show room also offers indoor furnishings, sofas, blinds, flower pots, vases and other household items.

4.6. G Plan Ltd

4.6.1. Three members of the study tour group attended a discussion on costing of furniture products with Mr. Sak Hutanawat of Para Wood Tech Industry. Discussions cover the following topics:

- (a) basis cost calculation of a product,
- (b) determination of the price margin, and
- (c) final setting of the price.

4.6.2. The group also visited G. Plan Limited at Sukhumvit Road and also studied the display of interior decoration at their condominium in Rama road.

4.6.3. G. Plan is equipped with computers which offers the customers with a wide range of interior decoration for rooms. Furniture designs are stored in the computers for the customers to choose. The customer's choice is then relayed to another computer at the decoration unit and prompt home decorative service will be completed within 10 days.

4.7. Sun Cabinet Co. Ltd.

4.7.1. The tour group visited Sun Cabinet Co., Ltd. In Pathumthani. The group was led around the factory by the factory manager. Range of products comprise; Scandinavian type high class teak office furniture, bed room furniture, cabinets, and sets of dining room furniture. Type of raw material used in the factory includes rubber wood from Thailand; teak, and padauk imported from Myanmar; oak, ash, cherry imported from USA; and particleboard imported from Australia and New Zealand. Exports are to USA, Europe, and Japan in 20' containers. Shipments average (15) to (16) containers per month.

4.7.2. The factory produces Scandinavian designs under the supervision of two experienced furniture specialists from Denmark.

4.7.3. Sun Cabinet is equipped with most modern and expensive machinery from companies like Homag, Wemhoner, and DMC, from West Germany; and Mobidelli from Italy.

4.7.4. The system of manufacturing furniture is based on the "Complete Set Procedure Production" system which requires every worker to operate more than (2) machines. Production is divided into (4) sections:-

- (a) Machining section.
- (b) Assembly section.
- (c) Finishing section.
- (d) Packaging section.

4.7.5. Cabinets are produced fully assembled. Tables and chairs are produced in KD form for easy packaging.

4.7.6. The group studied the finishing process using sanding sealer as a base coat, and application of teak oil with a soft brush. Staining and lacquering are also used in the factory.

4.7.7. This factory consists supporting units such as maintenance section, tool grinding and sharpening section and a 500 KVA transformer.

4.8. Sun Para Tech Co. Ltd.

4.8.1. The tour group visited Sun Para Tech Co. Ltd in Bang Pa-in, and were taken around the factory. This factory produces three layer tongue and grooved parquet. Raw Material used is rubber from Thailand and teak, oak, ash, maple, spruce and merbau are imported. Production capacity is about (50) containers per month. Markets are Denmark, Germany, Australia, USA, and Switzerland.

PROCESSING OF (3) LAYER PARQUET

4.8.2. Their system of producing three layer parquet starts from processing (5) layers of wood using urea formaldehyde glue and a hot press.

4.8.3. The first and fifth layers consists of high quality veneers, such as teak, oak, ash etc. which will later become the top layer. The second and fourth layers composed of rubberwood or other low cost timber arranged in a perpendicular position to the first and fifth layers. The central layer or third layer is also rubberwood, that is over twice the thickness of second and fourth layers, arranged in a parallel position as the first and fifth layers. These (5) layers of wood are fixed together with glue and pressed by a hot press.

4.8.4. The (5) layer boards are cut vertically at the centre (the third layer) by a band saw resulting in two boards of (3) layer parquet. After cutting, the third layer becomes bottom layer and the first and fifth layers becomes the top layer for the three layer parquet.

4.8.5. These boards are machined by a moulder into tongue and groove. Every defect on the top layer is inspected and any occurrence of gaps in wood are filled with saw dust paste and pressed by electric irons to get a smooth surface.

4.8.6. Processed tongued and grooved three layer parquet is fed into the automated sanding and finishing line, which operates on the serial processing of:

- sanding machine
- water base primer coating machine
- ultra violet drying machine
- sanding sealer coating machine
- sanding machine
- ultra violet drying machine
- sanding sealer coating machine
- ultra violet drying machine
- final stage sanding machine
- final ultra violet coating machine
- second final (wet on wet) ultra violet acuric coating machine
- ultra violet drying machine

4.8.7. After passing through these (12) stages of automated processing, the three layer tongued and grooved parquet are packed and loaded into the containers for shipment.

4.8.8. This technology is entirely new to Myanmar though it is learnt that it is already available in many countries including Laos and China.

4.9. Sun Wood Industries Co. Ltd.

4.9.1. The tour group visited Sun Wood Industries in Bang Pa-In. The factory manager briefed the group and led the group around the factory. Range of products are Scandinavia design teak dining furniture, garden furniture, living

room furniture, finger jointed boards, mosaic panels, and tongue and groove floorings. Raw materials used are mainly rubber wood from Thailand, teak imported from Myanmar, oak, ash from USA and polonia from China. Exports about (20) numbers of forty foot containers per month to Japan, England, USA, and Australia.

4.9.2. Sun wood's competitiveness is to a great extent by its strict system of quality control. Every single step of the production process from the selection of standard grade (1) teak to the finished product, is monitored closely to ensure premium quality throughout. As a result only the very best furniture is produced.

4.9.3. All components are processed by using templates (jigs) to get accurate dimensions as well as to prevent workers from operational hazards. Every worker is required to handle (2) to (4) machines. The factory consists of four production lines, each provided with (3) male and (15) female workers producing (60) chairs per day, totalling (240) chairs daily for (4) production lines. Chairs are produced fully assembled.

4.9.4. Medium density fibre boards (MDF), overlaid by teak or other valuable species, are used for producing cabinets and tables. Drawers are assembled by a very light weight timber called polonia (cotton wood) imported from China. Cabinets are produced fully assembled, while tables are produced in knock down (KD) form for easy packaging.

4.9.5. There is also an upholstery making and fitting section in this factory.

4.9.6. Finishing is performed in a special enclosed room called "over pressure room". The pressure inside the room exerts paint to secure firmly on the timber face and also prevents dust from activating inside the room.

4.9.7. Polyester sealer is used as a base coat and polyurethane is applied by a hand brush for final coating. Staining process and emulsion polymer isozianate final coating is also used.

4.9.8. A small parquet and mosaic processing factory is also added in the Sun Wood Industries plant which operates offcuts and waste into exportable products. The mosaic panels are finished by a sanding sealer and polyurethane coat.

4.10. Santi Forestry Sawmill, Sun Furniture Co. Ltd.

4.10.1. The tour group proceeded to Santi Forestry Saw Mill in Bangsai, established since 1972.

4.10.2. It is a modern sawmill with a daily one shift capacity of 80 cubic meters. It produces high grade excellent sawn teak. This factory also facilitates kiln drying with a capacity of 580 cubic meters per charge.

4.10.3. Teak logs imported from Myanmar are sawn into decks, margins, planks, boards and long scantlings. It also produces according to customers' orders.

4.10.4. This saw mill emphasises in producing boards of wide widths as far as possible. It was learnt that this factory produces 6"x2"x6' and up average 11'/12' long liner decking and its getting about. US\$ 5300 CIF per ton for export to Finland.

4.10.5. This factory maintains sawn timber stock valued at US\$5,000,000 for immediate supply.

4.10.6. There is a furniture factory in addition to the sawmill. It produces garden furniture, dining chairs, tables and other furniture. There is a show room in this factory and the solid garden furniture displayed in this show room are exported to Europe and USA using the reputed brand name of Lister company of England established since 1883.

CHAPTER 5

5. OBSERVATIONS MADE BY THE STUDY GROUP

5.1. Malaysia

5.1.1. Export of wood based products have increased tremendously within a period of 12 years from 1985-96.

<u>Furniture Exports</u>	<u>1985</u>	<u>1996</u>	<u>Difference:</u>
(RM in Million)	13	2168	(+)2155

5.1.2. Total wood based exports in 1996 exceeded RM(8372) million, log exports decreased RM(512) million compare to (1985) figures.

5.1.3. This distinctive progress in export is due to the encouragement from the Malaysian Government and an assisting policy together with keen interest and participation of the private sector.

5.1.4. Tremendous increase in export earnings during the (12) years period is due to the following factors:

- Prolific small and medium scale industries operated in this activity.
- Only a few specialised furniture components are manufactured on an industrial scale in each factory.
- Normally factories do not kiln dry on their own, they just buy kiln dried conversions saving time, labour and cost.
- 1158 saw mills, 137 impregnation plants, and 130 dry kilns operate their own specialised scheme.
- Quality control is done at every step.
- Emphasis is concentrated on finishing and staining using latest modern methods and chemicals, which is complemented by supporting

industries which manufacture fabric, leather, cushions, hardware and other accessories.

- Government encourages foreign investment by giving investment incentives such as tax allowance and tax exemption.
- Taiwan's rising production cost and shortage of raw materials enabled Malaysia to have access to the huge USA furniture market once supplied by Taiwan.
- Quality control is maintained at every step of production and MTIB personnel inspect at every export exit for quality to ensure good reputation of Malaysian products and levy of taxes.
- Training facilities are provided at Technical Training Centres under MTIB and FRIM.

5.1.5. As a result Malaysia is 15th among the 20 largest major furniture exporting countries.

5.2. Thailand.

5.2.1. Thailand has over (800) wood processing plants and annual exports of furniture are estimated approximately at Baht 18,000 million (about US\$ 600 to 700 million).

5.2.2. It was learnt that Thailand banned the export of logs in 1977 and the felling of trees from natural forests in 1989. Log exports account for only 1% of the total export income which does not effect much on the Thai economy.

5.2.3. 90% of raw wood such as teak, rosewood, oak, maple, beech, pine, kempas, merbau, margucie come from other countries.

5.2.4. Shortage of raw material in the country compelled Thailand to concentrate on sourcing from locally processed rubber wood and also on cheaper and

5.2.5. Thailand's success in international furniture markets is due to the following reasons.

- Foreign investments are very common..
- Thai taxation policies encourage furniture manufacturers by discouraging imports of finished furniture products.
- New modern processing methods are used.
- Thai furniture producers do not concentrate on particular markets, but prefer to distribute to a wider range of markets practising differential and tactical pricing methods to different market segments. For example, a chair sold to Japan for US\$ 100 may be sold at US\$ 90 or 95 to Italy to stimulate demand.
- Trips to existing export market outlets are made every year for information and discussions with regular customers on prevailing market conditions.
- Immediate market research trips are also made whenever necessary to solve sudden rise and fall in demand, fluctuating prices, and also for finding new market opportunities.
- Thailand's advantage in wood based industries is due to installation of highly effective quality machines from Italy, Germany, and Japan in most factories.
- Strict quality control is carefully monitored at every stage of production.
- Staining and finishing is done by modern machines to enhance value .
- After processing packing, and loading onto containers are done immediately.
- Some Thai companies bought and use international trade marks and brand names like Lister, Kikodan in exporting to the international markets.
- Italian and Danish designers and architects are recruited to produce designs that are more competitive in international markets.

- Furniture is produced from high quality timber as well as modern hardware fittings, cushions and fabrics.
- Managers and workers work and communicate together on a trust and loyalty basis. They co-operate together to achieve better profits by sharing profits and losses together.

CHAPTER 6

6. Findings and Conclusions

6.1. Points that were most striking to the survey group are mentioned here because they are either not seen or not practised in Myanmar. The need of funds for purchase of spares, accessories and new equipment is an age old problem for countries that are not developed. And this is something to be solved within the sectors involved, or by inviting investments or innovating new arrangements to alleviate the problem.

6.2. However, points that can be corrected immediately or at a later stage are listed below.

6.2.1. Tools manufacturing industries. There are no industries in Myanmar yet. Time and money is wasting in sourcing them abroad.

6.2.2. Kiln drying facilities. There are some wood industries with self contained kiln drying facilities. Some do not have them. Facilities specialising in kiln drying on a large scale should be established and either sell kiln dried timber or accept orders for kiln drying on a contract or piecemeal basis.

6.2.3. Quality control. It is seen that quality control is done at every stage of production in Malaysia and Thailand. This is something that ought to be addressed immediately or one will be adding value to a piece of wood one is going to reject at the final assembly stage. Or one will be marketing low grade furniture of poor quality.

- 6.2.4. Production of few items only. Some Malaysian companies are producing on two or three components and export them on a large scale. This would seem to be a sound technique for smaller industries to adopt. Standardisation and mass production can be done.
- 6.2.5. Modern finishing methods. Myanmar uses the old fashioned French polish and lacquer for finishing. Staining is not done and it was very enlightening to study these methods abroad. Finishing is one important factor in attracting customers and it needs further exploring.
- 6.2.6. Furniture testing methods and standards. This is also one area where we could also look into to improve the image of Myanmar furniture products.