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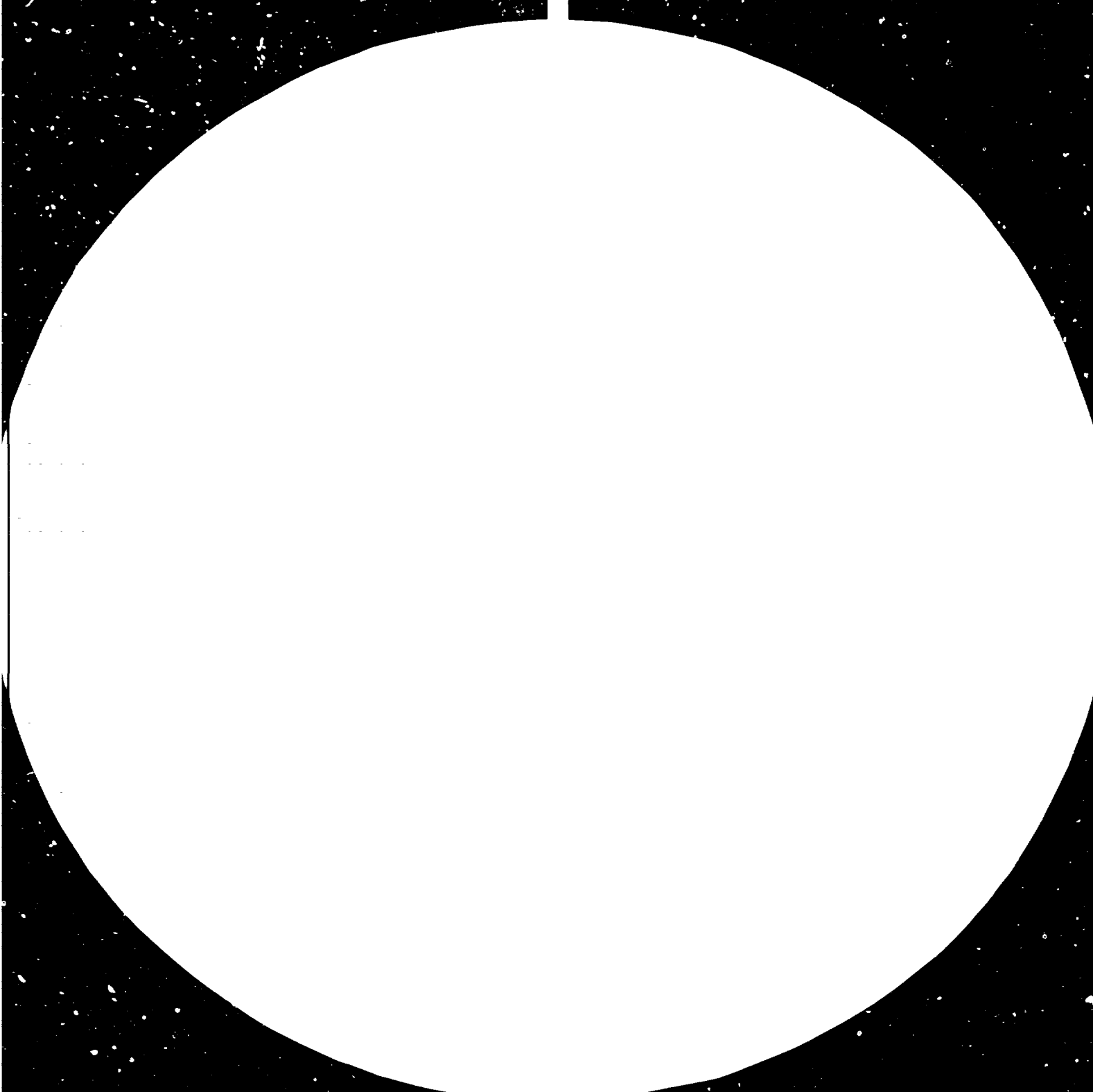
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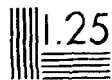
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Resolution test chart for 1.0 to 2.5 cycles per millimeter. The chart consists of a 3x3 grid of patterns. Each pattern has five vertical lines on the left and five horizontal lines on the bottom, with the resolution value in the center.



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INDONESIA'S FURNITURE INDUSTRY *

by

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Introduction

Essentially, the furniture industry in Indonesia has its origin as a cottage industry. Like for other kinds of handicraft, the skill to make furniture is handed down from father to son, and so we find that furniture makers are usually oriented to 'tailor-made' products.

In the past, those called carpenters or cabinet makers were those who could execute various kinds of furniture in accordance to the client's requirement and specification, using simple manual tools only.

This type of home industry I presume to be almost identical to that experienced by other developing countries, only that the agricultural structure of Indonesian society causes this kind of job sometimes to be considered a secondary employment, whereas farming, although seasonal, is of prime importance. This, however, excludes carpenters of Chinese origin who are well trained as experts in woodworking, since they specialize in this field.

There is also the category of carpenters whose mastery is in wood carving. They carve building components such as doors, panels and the like, as well as furniture like chairs, cabinets, beds, desks, etc.

It is important to keep this characteristic in mind, as it is fundamental to our understanding of the development of the furniture industry nowadays, to which background we might derive the following facts:

1. The form of the business: Usually the furniture business in Indonesia takes the form of a personal undertaking (private ownership), employing a few carpenters. As a matter of fact, the owner is also a carpenter himself. This kind of industry has a limited capacity in terms of capital investment, manpower and production equipment. This type of enterprise, having

5 to 20 workers, is the most common throughout the country.

2. The hand craftsmanship: As explained before, the 'tailor-made' characteristic of the work causes it to have little, if any, differentiation. Someone who calls himself a carpenter is supposed to be able to do everything from A to Z independently (on his own). Of course, there are exceptions as in relatively larger enterprises, the finishing and upholstery part is deemed to be a special skill (which means there are special workmen for this type of work).

As for tools, mechanical implements are usually unknown. This, firstly, is due to the factor of means and secondly because of the limited distribution of electricity to operate machinery with and thirdly, owing to the domineering influence of the hand craftsmanship which generally relies on personal proficiency, the dexterity of hands working with the use of elementary tools only.

3. The marketing scope: As most products are produced according to the system of job order, this kind of business is unable to rationalize and produce its own standard designs ('batching' system), because there is a too great variety of demand.

Therefore, when such businesses get a large enough order of identical products, the way out taken is to hire more workmen according to requirements, rather than 'batching' them.

A New Era and its Problems

In concurrence with the change in political conditions in Indonesia, industrialization has become one of the prime targets of the country's economic development. And so, since the realization of the Foreign Capital Investment Law (No. 1/1967) and the Domestic Capital Investment Law (No. 6/1968), Indonesia has entered a new era in its wood industry. As a country with vast forest resources, Indonesia has targeted the exploitation of its wood resources as the second foreign currency earner after oil. Since that moment, exploitation concessions have been opened to foreign investors

followed by the establishment of sawmills throughout the archipelago, especially in Sumatera, Kalimantan and Sulawesi. The introduction of modern processing is emphasized by the concessionholder to attain their export target.

Having realized the negative impact results from the export of uncontrollable quantities of toys, processing of the logs into semi-processed products. This has resulted in the introduction in the last ten years of the processing of plywood and mouldings with sophisticated machinery.

To give a clearer description of Indonesia's potential I quote the export figures noted by the NAFED (National Agency for Export Development) as follows: (figures in US dollars)

	<u>1978</u>	<u>1979</u>
Logs	85,700.000	224,500.000
Plywood/veneers	8,700.000	31,300.000
Mouldings	119.000	136.000
Wooden furniture	16.000	1,700.000

In the meantime, within the Third REPELITA (five year plan) the Government has targeted a far greater exploitation of lots, out of which 14 million m³ were to be allocated for the period of 1979/1980. This means that about 8 million m³ should be processed into sawn timber to be utilized for both the domestic and export markets.

From the above data we notice that the value stemmed from furniture is incredibly low (about 0.7 per cent of the export value of sawn timber, and only 0.1 per cent of the export value of logs).

Certainly the new era has had a great impact toward the furniture industry's development; from the industrial technology point of view the furniture firms have started to use machinery; technologically, the influence of rationalization has resulted in the use of standardized measurements, preservation of timber and the realization of quality classification; while economically the need for systematic business management and the marketing strategy which should be planned scientifically has been created.

This new era has given rise to many problems and dilemmas, the unproportional percentage of 0.1 per cent clearly expresses the dilemma, on the one hand the richness in wood-produce being invested as a source for foreign currency, on the other hand the manufacturing industry is not yet well established.

As far as the mechanization is concerned, I would like to review what was said earlier about the characteristics and background of the traditional furniture industry in Indonesia: mechanization has a negative effect upon the value of craftsmanship maintained by the carpenters, but on the other hand the furniture industries which have started using machines often do not use these machines in an optimal manner. Should the exploitation costs of machinery including the costs of electricity be calculated in terms of European standards, I am quite confident that the use of machinery in Indonesia would not seem a good idea, if for no other reason than because the electricity cost of approximately US\$ 560 per month for only one shift operation of a plant with 105 KVA installed. (Wood processing industries having a small energy requirement already could not survive were these costs to increase as they are Government subsidized as it is).

Perhaps the reason for this discrepancy is that the use of machinery is not accompanied with an appropriate change of the working system, and yet these industries still base their marketing upon job orders which are great enough in terms of variability.

Meanwhile, there remains another problem over the labour productivity. Although I am unable to indicate exact figures, the average working efficiency is still far below the human performance. This is certainly a very complex problem. Anyone might suggest opinions from different perspectives and perhaps the sociological reason that Indonesians usually adhere to a collective pattern of life so that there is a lack of competitive spirit has something to do with it. Perhaps the Indonesian worker's diet lacks the nutrients necessary for this sort of labour or, more likely, the average Indonesian worker has no job motivation since there is little chance of bettering him or herself in that particular job.

It is not my intention to focus on the "apathetic" state of Indonesia's workers however in order for the reader to understand fully the situation mention must be made of it. Unfortunately, it is this human element of the furniture industry that is holding back progress. Most workers are incapable of handling the simplest of woodworking machines and few of them are willing to learn how. It is my opinion that were it not for Government intervention, then, that our furniture industries throughout the country would be even less industrialized than they are at present. Of course, this is a problem which most developing countries face when struggling with unskilled labourers.

The production of furniture in Indonesia

To date we have no exact figure which corresponds to the number of furniture producers and how great their capacities are. As a rule, though, the large and medium scale plants using machinery and employing some 50 labourers or more are located only in Jakarta, Bandung, and Semarang while the rest are categorized as cottage industries. Plywood and veneer plants are emerging in a few seaside towns like Medan, Pontianak, Banjarmasin, Makasar, Gresik, Jakarta, Semarang and a few others.

The Central Bureau of Statistics of Indonesia carried out a survey in 1977 and found that there were about 150 large and medium sized industries and that these shared a total production value of approximately US dollars 6.08 million. Obviously, this figure has increased during the last four years since the Government is counting on as much as US dollars 1 billion from the export of our wood for the current five year plan (US dollars 100 million is hoped for from the export of furniture).

Prospects of the Furniture Industry

One would say that the vast forest resources located throughout the archipelago and a population of 148 million are self-explanatory. Besides these, we must so note that the Government which until recently was the biggest potential buyer of our products and that now our export potential is viewed differently.

Regarding the domestic market, although the imported furniture made from steel and other synthetic materials is brought in large quantities into the country, wooden furniture is still cheaper than the imported pieces (which are of poorer quality than wooden furniture). It is bothersome to think that the Indonesian elite continues to buy and import this cheaply made synthetic furniture since it is this group of persons who set buying trends and so discourages the founding of new manufacturing industries with Indonesian wood.

Regretfully, I cannot supply the reader with figures which correspond to the domestic market (since there are none available) but for the sake of study I will refer to a record achieved by a company in Jakarta. This company possesses the following machinery: dry kiln, moulders, planer, hydraulic press, besides the conventional machines like circular saw, sander, dowel and rod making equipment, edgers, etc. Employing 70 workers in one shift operation, this company has an average turnover of US dollars 40,000 per month and specified retail price in Indonesia for the different products as follows:

- Dining chair of Ramin with upholstered seat US\$ 24 per piece
- Dining table of Ramin, size 160 x 100 cm US\$ 80
- A single easy chair of Ramin with fabric upholstery US\$ 88
- A four door book case of Ramin, size 200 x 200 x 40 cm at US\$ 300

In terms of buying power, these prices are still felt to be too expensive for the average Indonesian, whose yearly per capita income is US\$ 360 according to statistics of the World Bank. For the middle and higher classes, however, they are fairly moderate.

It was mentioned earlier that one of the potential buyers of Indonesian furniture is the Government itself. Every year the Government spends several million US dollars to furnish schools, offices and public buildings throughout Indonesia, thus practicing the tender system.

Export System

The history of the export of furniture is only a few years old. Since the issuing of regulations limiting the export of raw materials (logs) and the granting of export incentive to the exporters of finished products, the value of exports has risen considerably viz:

<u>Country of destination</u>	<u>1977</u> (US\$)	<u>1978</u> (US\$)	<u>1979</u> (US\$)
European Common Market	-	62,104	119,734
Japan	-	501,733	1,098,436
Aust. alia	33,868	-	149,931
New Zealand	3,425	-	32,094

The data listed above is meant only to show the general trend and not to stress the nominal value. It is clear enough to see that in proportion to the export value of logs, the percentage of 0.1 per cent is simply unrealistic. Among others, the reason for this discrepancy may be due to the following:

- 1) Inconsistency in the standard of quality
- 2) Design problems
- 3) Inconsistent delivery times

There is also a problem concerning prices because shipment costs in Indonesia are relatively higher than in other ASEAN countries and so the CIF price plainly increases. For wholesaler, especially in Europe and the U.S.A., it is not the FOB price which decides the norm but the CIF price.

Design

Design is mentioned in this paper as one of the 'constraining' factors. Even for the domestic market the design most requested by consumers is of a 'kitch' taste and if not that then something grossly out of fashion (i.e. European or fashions set in the U.S.A., for example). Being a designer of furniture myself, I can be accused of being subjective. I will quote, then, from the writings of K.G. Lockyer, an industrial engineering professor, who says the

following: "...design is the translation of requirements into a form suitable for manufacture or use". This comment shows a definite lack of imagination in terms of the finished furniture product. Therefore, because of a lack of understanding of the methods of production many designs are either not produced at all or lost in the production itself so that what the consumer sees is oftentimes not at all what the designer intended. It seems that only the carpenter nowadays can execute the typically dowel type of design/construction relying on manual tools. To date industries having mechanical processing cannot produce such a design/construction. The contemporary furniture design in Indonesia is predominantly in the 'ornamental' stage and has not reached more than the most elementary level of industrialization in furniture making.

Conclusion

To sum up, it should be stressed that Indonesia's ultimate economic potential lies in its raw materials. If we can continue to make proper use of our forests (i.e. replenish what we take from this natural resource) then we will have a constant and unerring exportable item.

Needless to say, we are very proud of our handicraft talents and these should not be sacrificed to mass production products which are not pleasing to the eye. What we hope to achieve some-day is the combination of attractive, well-made pieces of furniture (produced by both skilled labourers and technically advanced machines) for both our export and home markets. Of course, in Indonesia we have to deal first with the problem of our country's economic philosophy which is at present not geared for competitive manufacture or selling. This, however, is typical of the sort of problems that other developing countries face and we hope to find our own solution to it in due course.



