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**GENERAL DESCRIPTION OF THE STATE OF THE FURNITURE INDUSTRY
IN CUBA AND ITS DEVELOPMENT PROSPECTS**

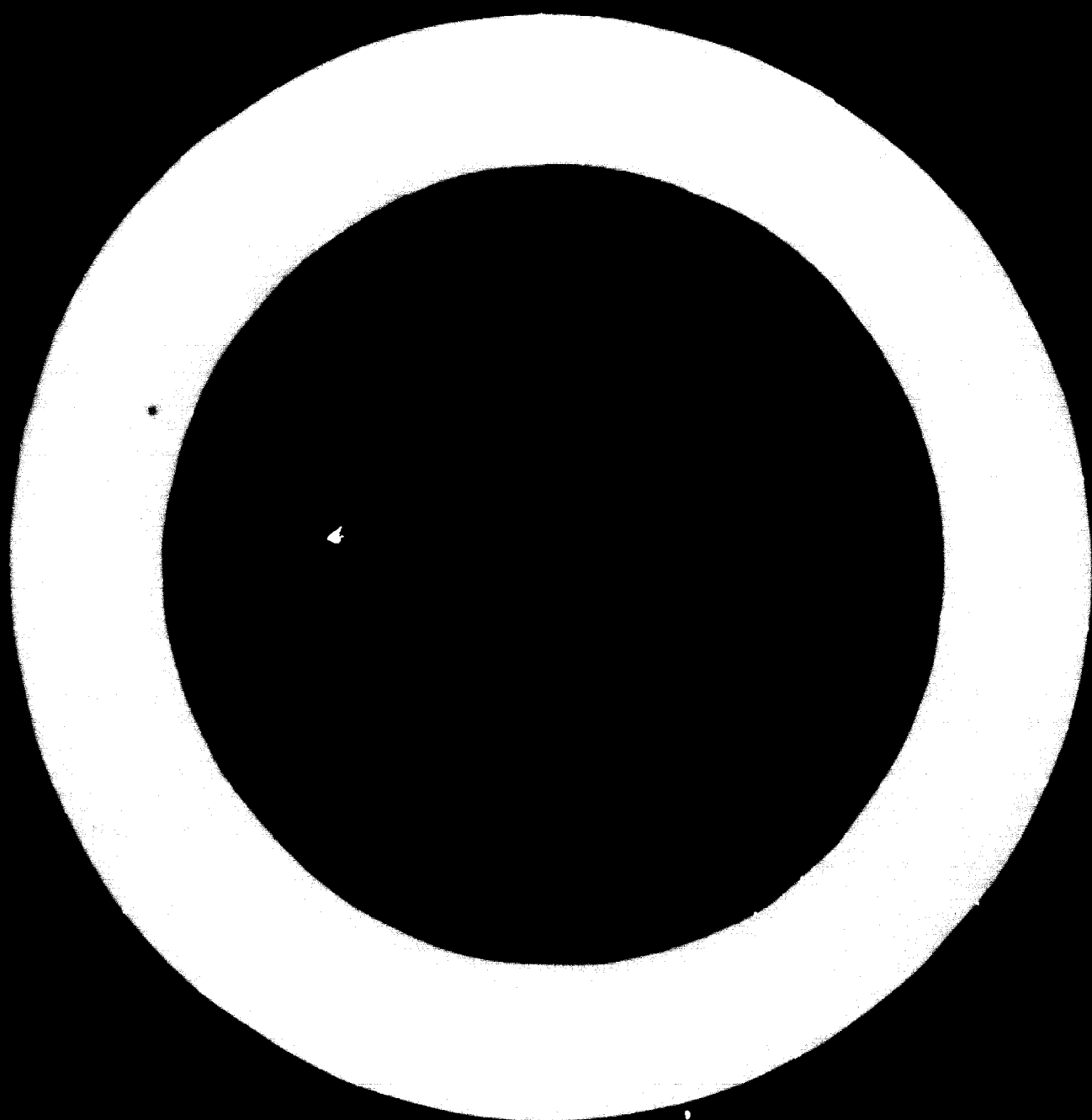
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^{1/} The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.



A. DESCRIPTION OF THE INDUSTRY

The Cuban furniture industry is made up to a large extent of small production shops scattered throughout the length and breadth of the island; this is attributable to the system of private production which existed in Cuba before the Revolution, with workshops reflecting the interests of their owners and not the needs of the nation.

The attached table shows the number of factories producing furniture in Cuba and the number of workers they employ, with a breakdown based on the number of workers per factory; the value of yearly production in thousands of pesos is also given.

The equipment of all our factories is conventional and has been in continuous use since the 1940s approximately.

This equipment shows an isolated technological distribution - that is to say, the processes are not combined in an assembly line and none are mechanized. Thus labour requirements are therefore high, the equipment being manually operated.

QUALIFICATIONS OF THE LABOUR FORCE

Those working in this industry are insufficiently skilled to meet the requirements of modern mechanized production lines, and while they have a good knowledge of furniture-making in general their educational level is insufficient to cope with the development of the industry and the technical and organizational problems which this brings with it.

Product Range

The industry's product range covers all the types of furniture used in the country, falling into three basic groups:

- (a) Furniture for school buildings of all types;
- (b) Furniture for dwellings;
- (c) Furniture for institutions and the like.

Raw Materials

The basic raw materials used in furniture production are the following:

- (1) Solid pine wood;
- (2) Plywood boards;

- (3) Sheets of multi-layer paper;
- (4) Electrically welded cold-rolled steel tubes;
- (5) Artificial leather for upholstery;
- (6) Clear and pigmented nitrocellulose lacquers for finishing;
- (7) Water-soluble anilines;
- (8) Melamine alkyd varnishes, acid-catalysed at ambient temperature;
- (9) Stove enamel for metal structural parts of furniture.

The raw materials and other materials used are in line with the equipment installed and the technological processes employed for their elaboration.

The use of solid wood as the basic raw material in a high percentage of cases, due inter alia to the conventional, manually operated equipment at the industry's disposal, results in a slow annual productivity rate per worker and in difficulties with regard to the supply of raw material, inasmuch as our country has no forestry reserves; these were exhausted as a result of the indiscriminate exploitation of the forests throughout the capitalist period in Cuba.

B. DEVELOPMENT PROSPECTS OF THE FURNITURE INDUSTRY

The large-scale programmes for the construction of school buildings, housing, etc., required by our country call for the parallel development of the furniture industry, so that the latter can be in a position to apply, in quality and quantity, the furniture needs of these new projects.

To cope with this demand for furniture, the following developments will be called for.

Modernization of existing factories

Our approach to the modernization of the industry is based essentially on the selection of particular factories showing appropriate characteristics for the introduction, with the aid of the necessary technological studies, of modern equipment of high productivity which will gradually replace the conventional equipment at present at the disposal of the plants concerned, so that in this way labour productivity can be raised.

Once the production increases obtainable through the modernization plan have been determined, new furniture factories would be fitted out with mechanized equipment in continuous production lines, both for the mechanical processing of boards and other raw materials and for surface finishing with the aid of modern technology.

In planning the modernization of selected factories, we are adopting the policy of specializing production on the basis of the equipment possessed by each particular factory; the lines of production will be distributed accordingly, primary emphasis being placed on interrelationships between different lines of production, so that the groundwork can be laid for a steady increase in productive co-operation between the different factories. This will mean taking small factories which possess inadequate equipment and space for embarking on large-scale furniture production programmes and having them specialize in the production of furniture parts and components which will be used to supply the larger factories possessing mechanized equipment; in principle, we do not feel that the latter plants should engage in these small-scale types of production, which tend to hinder mechanization and efficient continuous production.

Parallel with the modernization plans and arrangements for dividing up the range of products, we attach very great importance to the rationalization and standardization of designs, taking into account the requirements of the furniture to be produced and the various raw materials which may be available; such rationalization will not mean a reduced product range, but the range which is genuinely needed, with neither too many types of production nor too few.

The essential raw material on which the furniture designs will be based is particle board, which, in the light of our raw material resources, will need to be made from sugar cane bagasse, a material which we have at our disposal in large quantities.

The basic problem in regard to the utilization of this raw material is the absence in our country of plants producing this type of board in sufficient volume to meet the requirements of the furniture-manufacturing programme which we must undertake to satisfy Cuba's needs.

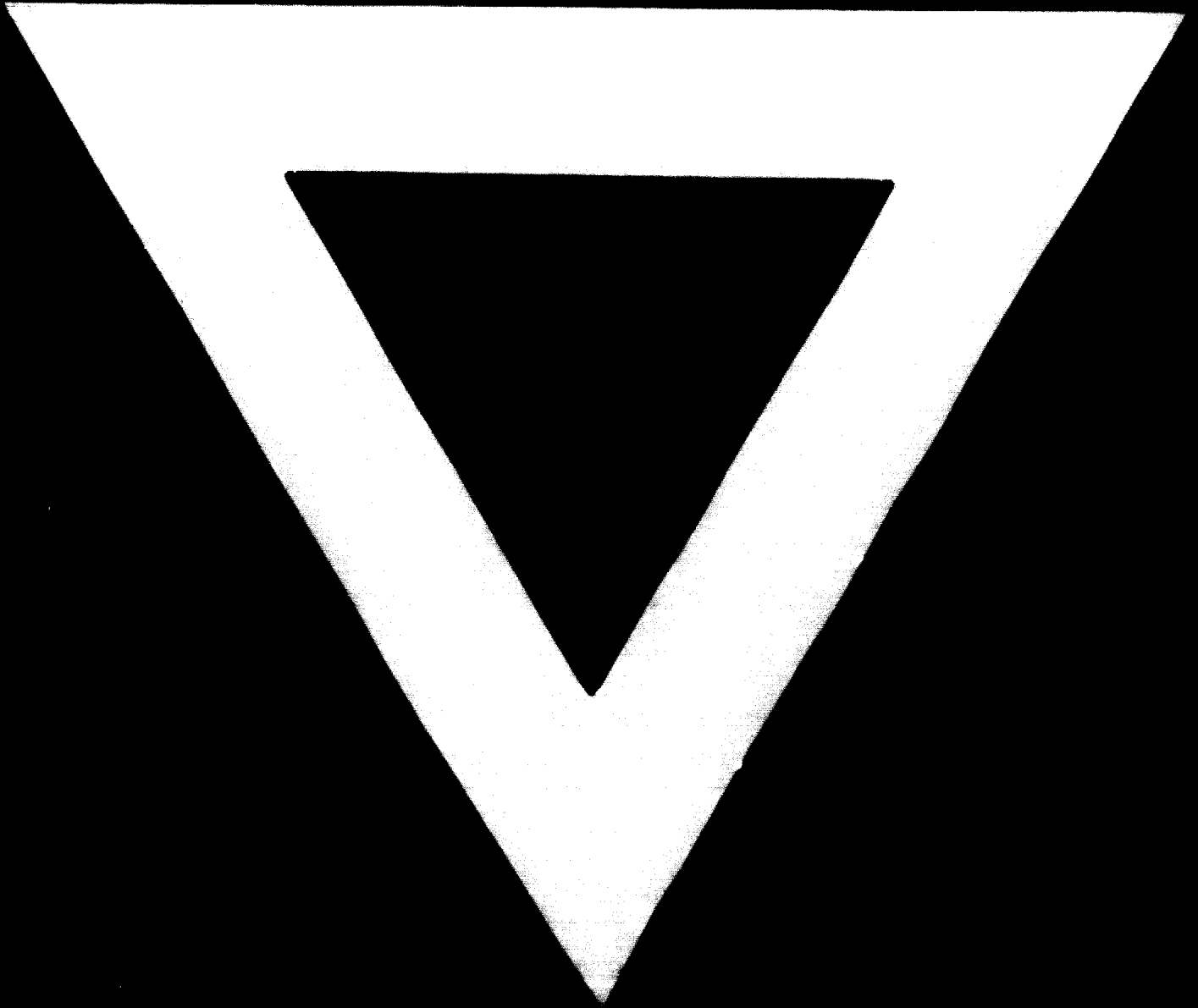
Of vital importance for the achievement of these development goals is the training of the existing labour force and of new technical cadres at different levels to carry out the difficult technical and organizational tasks which a plan of this magnitude involves.

If these ends are to be attained, a massive training plan must be drawn up which will cover the various levels as well as the various stages which will have to be passed through in the modernization of the industry.

EMPRESA CONSOLIDADA DE MUEBLES Y ENVASES
(CONSOLIDATED ENTERPRISE FOR FURNITURE AND PACKAGING MATERIALS)

FURNITURE FACTORIES

<u>Year</u>	<u>Number of workers</u>	<u>Number of factories</u>	<u>Total number of workers</u>		<u>Value of production Thousands of pesos</u>
			<u>Total figure</u>	<u>Women included in this figure</u>	
1972	Up to 25	5	84		337.2
	26-50	22	816		4,027.0
	51-100	19	1,295		5,948.1
	101-200	6	768		2,862.3
	201-300	2	531		4,865.2
	TOTAL	54	3,494		18,039.8
1973	Up to 25	4	80	2	445.4
	26-50	18	691	55	3,918.7
	51-100	18	1,277	110	5,723.8
	101-200	7	828	20	6,680.1
	201-300	1	242	3	2,040.7
	301-400	2	644	33	10,620.6
	TOTAL	50	3,762	223	29,429.3



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