APPENDIX 1: FAO YEARBOOK DEFINITION OF "PLYWOOD"

Plywood, veneer plywood, core plywood, including veneered wood, blockboard, laminboard and battenboard. Other plywood, such as cellular board and composite plywood.

Veneer plywood is plywood manufactured by bonding together more than two veneer sheets. The grain of alternate veneer sheets is crossed, generally at right angles. *Core plywood* is plywood whose core (that is, central layer, generally thicker than the other plies) is solid and consists of narrow boards, blocks or strips of wood placed side by side, which may or may not be glued together. (This item includes veneered wood in sheets or panels in which a thin veneer of wood is affixed to a base, usually of inferior wood, by gluing under pressure). *Cellular board* is a plywood with a core of cellular construction, while *composite plywood* is plywood with the core or certain layers made of material other than solid wood or veneers (italics in the original).

See FAO (1988). The definition is the same as in FAO (1994).

The SITC code is 634.3/4 Plywood.

APPENDIX 2: TRADE, AND OTHER CLASSIFICATIONS FOR WOOD-BASED PANELS

CCCN = Customs Co-operation Council Nomenclature
HCDCS = Harmonized Coding Description and Coding System
HS = Harmonized System
SITC = Standard International Trade Classification

Indonesia 1984 to 1988, Trade Statistics.

Veneer is not called this. It is assumed to be in the following classification.

CCCN code 4414000 SITC code 6341000

"wood sawn lengthwise sliced or peeled thick not exceeding 5mm"

Plywood has only two classes:

CCCN code 4415110 SITC code 6342100

"plywood consisting solely of sheet faced with teak"

CCCN code 4415190 SITC code 6342900

"other plywood consisting solely of sheets of wood"

Blockboard is defined:

CCCN code 4415200 SITC code 6344100

"blockboard, laminboard, battenboard and similar laminated"

There are three other classifications which presumbaly include *particle board*; it is not specified as such.

CCCN codes 4415900; 4417000; 4418000

SITC codes 6344200; 6343100; 6343200

Indonesia from 1989, Trade Statistics

Veneer is labelled as such, and is in three categories.

CCCN codes 44081000; 44082000; 44089000

SITC codes 63411000; 63412200; 63412900

Particle board is labelled as such, and is in two categories.

CCCN codes 441010000; 441090000

SITC codes 63422000; 63423000

Blockboard is no longer listed as such, and its classification is doubtful in the amended system.

Plywood has ten categories, some of which are difficult to distinguish, and few of which are appropriate to the Indonesian export range.

CCCN codes
441211000; 441212100; 441212900; 441219100; 441219900; 441221000; 441229900; 441291000; 441299900.

SITC codes
63431100; 63431210; 63431290; 63439100; 63439900; 63441100; 63441910; 63441990; 63449100; 63449999

APPENDIX 3: APKINDO DIVISIONS OF PLYWOOD

The data found can differentiate:

"raw plywood", meaning common plywood.

Blockboard is often specified.

Veneer, when included in "plywood" exports, is mentioned.

"Special Item" and "New Item" are not defined but presumably refer to overlaid/surface added specialty plywood; and thick, surfaced panels.

Data are not differentiated by glue line, thickness or size (for example, 6 feet by 3 feet or 8 feet by 4 feet sheets).

APPENDIX 4: DETAILS OF VALUE-ADDED CALCULATIONS

All values are in US$ and based on one cubic metre of log (under bark).

Plywood 1991. Y.E.31/12

Case A: Best estimate case, recovery rate 55%.

Cost of production: US$145 per cubic metre of plywood.

Export sales: 85% @ US$353 per cubic metre of plywood minus US$39 for freight.

Domestic: 15% @ US$200 per cubic metre of plywood.

Calculation Cost: 0.55 *plywood c.o.p. = US$79.75 per cubic metre of log.

Returns: 0.55*85% = 0.4675 @ 314 = US$ 146.8 export earnings per cubic metre of log.

0.55*15% = 0.0825 @ 200 = US$16.50 = 33,470 rupiahs, domestic earnings per cubic metre of log.

Returns from 0.25–0.30 cubic metres of wood waste: US$0.

Total returns: US$163.30 per cubic metre of log.

Profit before log cost: US$163.3 less costs (145*0.55 = 79.75) = US$83.55 per cubic metre of log at mill.

The freight figure is nominal only.

Case B: As above, but with an extra US$39 per cubic metre allowed for export value.

The amendment is: Return 0.55*85% = 0.4675 @ 353 = US$165.02 export earnings.

This gives a profit before log cost of US$101.77 per cubic metre of log at mill.

More directly, this is 0.55*85%*US$100 = US$46.75 per cubic metre of log for every US$100 change in value of export plywood.

Case C: As for Case A but c.o.p. allowed at US$120 per cubic metre.

The amendment is: Profit before log cost US$163.3 less costs (120*0.55 = 66.00) = US$97.3 per cubic metre of log at mill. Export earnings are the same.

Case D: As for Case A, but recovery of 62.5% allowed.

The amendment is: Profit before log cost US$185.56 less costs (145*0.625 = 93.75) = US$91.81 per cubic metre of log at mill. Export earnings are then 0.625*85%314 = US$166.81.

Case E: As for Case A, but all sales for export.

The amendment is: Profit before log cost US$172.70 less costs US$79.75 = US$92.95 at mill.

Export earnings are then 0.55*314 = US$172.70.

Sawnwood Value-added

Case A: Best estimate case, recovery rate 43%.

Cost of Production: US$90 per cubic metre of sawnwood.

Export sales: 85% @ US$217.4 per cubic metre of sawnwood.

Domestic: 15% @ US$90 per cubic metre of sawnwood.

Calculation Cost: 0.43 *sawnwood c.o.p. = US$79.75 per cubic metre of log.

Returns: 0.43*85% = 0.3655 @ 217.4 = US$79.46 export earnings per cubic metre of log.

0.43*15% = 0.0645 @ 90 = US$5.80 = 11 7632 rupiahs domestic earnings per cubic metre of log.

Returns from 0.55 cubic metre of wood waste. US$0 (Sawmill waste is better quality than plymill waste for reconstituted panels).

Total returns: US$85.26 per cubic metre of log.

Profit before log cost: US$85.26 less costs (90*0.43 = 38.7) = US$46.56 per cubic metre of log at mill.

Case B: Assuming all sawnwood is exported.

Returns: 0.43*100%*217.4 = US$93.48 export earnings per cubic metre.

Profit before log cost: US$54.78 per cubic metre of log at mill.