Chapter 6
Secondary Processed Wood Products Markets [1]

Highlights

- *Trade of secondary processed wood products (SPWPs) is growing faster than that of primary products in both temperate and tropical species.*
- *The United States and the EU are the world's major producers, importers and exporters of SPWPs.*
- *Volumes of SPWPs traded are difficult to assess from trade statistics, however they are still small compared to primary wood products.*
- *Furniture is the most traded SPWP in the ECE region and overall the region is a net importer.*
- *While levels of intra-regional trade continue to grow, imports from outside the region, and especially tropical SPWPs are growing faster.*

Secretariat introduction

This special chapter was written by Mr. Pierre-Marie Desclos, a consultant for forest products industries. Our intention is to look closer at the secondary processed wood products sector in order to put them into perspective with the primary wood products sector that we traditionally analyse. These products have a higher unit value than primary products, but are substantially less in volume. We thank Mr. Desclos for this introduction into secondary products and we look forward to his more thorough analysis which will be published, along with considerable statistical information, in a separate Geneva Timber and Forest Discussion Paper and presented to the joint Timber Committee and European Forestry Commission Session.

The revised Joint Forest Sector Questionnaire as of this year has a separate section requesting countries' statistics on trade of further processed sawnwood, furniture, packaging and paper products (questionnaire in annex). While questionnaire results were not received in time for this publication, it is our intention to begin to report regularly on this important market which drives part of the demand for primary products. Aside from Mr. Desclos' personal experience and expertise, statistics in this chapter were from Comtrade (the United Nations world trade database) and COMEXT (the European Union trade database) industry associations and international organizations, specifically ITTO and FAO. A section of chapter 14 on tropical timber presents SPWPs from an ITTO perspective.

A Geneva Timber and Forest Discussion Paper is envisaged in 2000 in which the author will expand on the topics addressed in this chapter.

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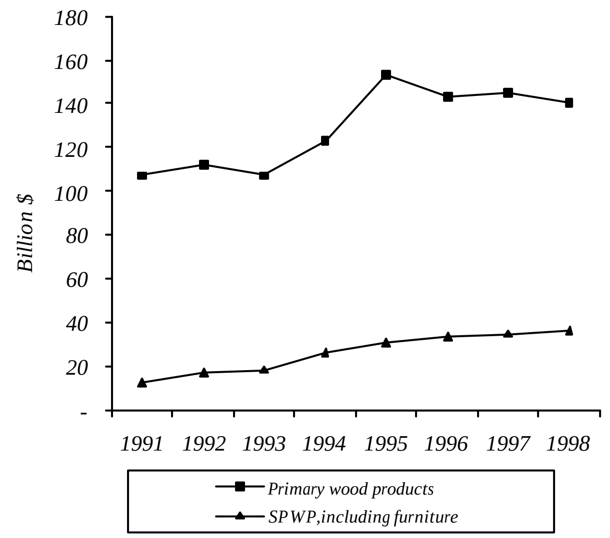
6.1 Introduction

In recent years there has been a rapid expansion of the international trade of secondary processed wood products (SPWPs). This evolution is driven by several factors:

GRAPH 6.1.1

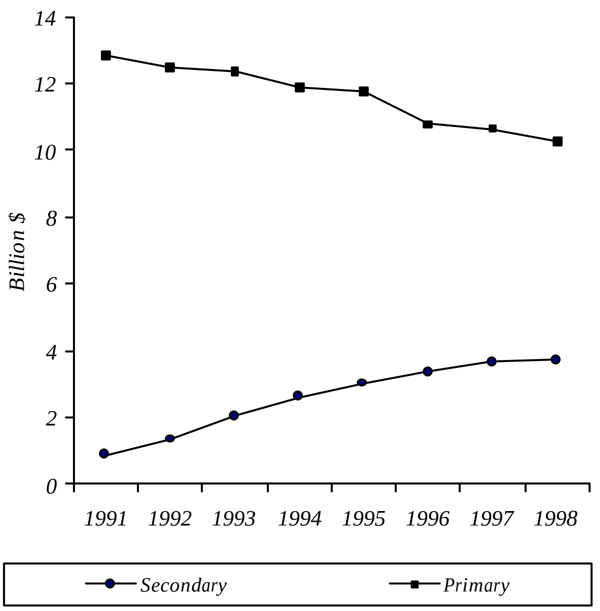
World trade of SPWPs versus primary products, 1991-1998



Sources: FAO, 2000; and Comtrade, 2000

GRAPH 6.1.2

ITTO "consumer countries'" imports of primary and secondary tropical timber products, 1991-1998



Source: ITTO, 2000.

- *the development of consumption in various economic areas of the globe;*
- *a revision of the structure of manufacturing industries, focusing on core-competence, opting for less vertical integration and consequently more out-sourcing ;*
- *the differential of manpower costs between developing and developed nations;*
- *the governmental incentives of many developing countries aiming at adding value locally and the resultant investments; and*
- *improved and competitive delivery logistics.*

The volumes traded of SPWPs are small compared to primary-processed wood products, such as roundwood, sawnwood, wood-based panels and pulp and paper. However, the value of trade is rising much faster (graph 6.1.1). For the graph, export values are used.

In tropical timber, the inverted trends of imports of primary and secondary products are a result of tropical timber producers drive to produce value-added products (Annual Review and Assessment of the World Timber Situation, 1999, ITTO, 2000) (graph 6.1.2).

6.2 Secondary processed wood products

6.2.1 Definitio ns

In this chapter, SPWPs include essentially wood products and furniture (table 6.2.1). This report will consider the products resulting from further transformation of sawnwood and other wood-based material, excluding further-processed panels sold as such. The range of operations and process is very wide, starting with the cutting to size of components and ending with the manufacture of finished and complex products such as pieces of furniture.

6.2.2 Tracking SPWPs

The trading of SPWPs at any intermediate steps of a given manufacturing process, as semi-finished components or as finished parts, makes their identification and definition at some stages uncertain. It is also worth noting that finished, and even semi-finished products, are rarely made only of wood. They may incorporate chemicals, finishes, hardware, plastic, glass, metal or leather components. This should be remembered when analysing and/or comparing the value of various groups of products. The complexity of analysing all theses factors partly explain why the headings "Other products" are frequently so big.

In some high value-added products, traditionally listed under "wooden" headings, the wood material, in quantity *and value, accounts for a very minor share of the final product value.*

Considering the specificity of furniture as a product and market group, and to make it more easy to read, this report has divided SPWP in two sectors:

- *wood products, grouping items listed under HS codes 44: profiles and mouldings, painting frames, packing boxes, coopers' products, tools, builders' joinery and carpentry, tableware, marquetry and other articles; and*
- *wood furniture, grouping items listed under HS codes 94: seats (upholstered seats, seats and furniture for office, kitchen, bedroom and other uses).*

The list of products selected to build this report is presented in table 6.2.1. The short descriptions used in the table are as close as possible to the international

TABLE 6.2.1

List of products mentioned in the report and their codes

Harmonized System [1] code	Product description
WOOD PRODUCTS	
4409	Continuously shaped wood (including strips and friezes for parquet flooring, not assembled) (moulded tongued, grooved, rebated, chamfered, V-jointed, beaded, rounded, etc.) along any of its edges or faces, whether or not planed, sanded or finger-jointed.
4414	Wooden frames for pictures, paintings, photographs, mirrors, etc.
4415	Wooden packing cases, boxes, crates, drums and similar packings, cable-drums of wood, pallets, box pallets etc.
4416	Barrels, casks, vats, tubs and other coopers' products and parts thereof, of wood, including staves.
4417	Tools, tool bodies, tool handles, broom or brush bodies, show lasts, etc.
4418	Builders' joinery and carpentry, including cellular wood panels 441810 Windows and their frames 441820 Doors and their frames and thresholds 441830 Parquet panels 441840 Formwork (shuttering) for concrete 441850 Shingles and shakes 441890 Other
4419	Tableware and kitchenware, of wood
4420	Wood marquetry and inlaid wood; caskets and cases for jewellery or cutlery, and similar articles, of wood; statuettes and other ornaments, of wood; wooden articles of furniture not falling within chapter 94
4421	Other articles of wood: Clothes hangers, spools, spindles, bobbins, blind rollers, match splints, toothpicks, etc.
FURNITURE	
Seats, with wooden frames	
940161	Upholstered
940169	Others
Wooden furniture	
940330	For office
940340	For kitchen
940350	For bedroom
940360	Other wooden furniture
940390	Parts of furniture [2]

1 Nomenclature.

2 The Comtrade six-digit heading 940390 covers all types of furniture parts, of metal, plastic or other material. In some national systems, eight-digit subheadings identify the wooden parts, such as COMEXT 9403.90-30 or the United States Schedule B 940390-70.

customs nomenclature and in some cases differ from the customary trade terminology. For example, "wood continuously shaped" regroups a wide range of products, each of them traded with specific commercial denomination: strips, friezes, sidings, claddings, panelling, sauna boards, wainscoting, mouldings, rods, dowels, etc.

Species are often used as a classification criteria within some products groups. It should nevertheless be noted that modern manufacturing technologies allow finger jointing, veneer-wrapping, gluing and assembling of different species together and this is frequently done.

6.2.3 Nomenclature

The codes and classification mentioned in this report refer to the Harmonized System (HS), used by most of the world's major trading nations. The 6 digit codes are defined by an international convention. For further differentiation, other digits may be added at a national level and may differ from country to country.

6.2.4 Sources of information

There are several sources of statistics regarding the trade flows of SPWPs. The main sources for this chapter are the following:

- the Comtrade database of the United Nations;
- the COMEXT database of the European Union's Eurostat;
- the United States Department of Agriculture's Foreign Agricultural Service database; and
- the ITTO publications and reports.

The production of finished products is documented by national statistics, even if they are rarely as detailed as the customs statistics.

Due to the impracticability of classification and coding of domestic trade, it is much more difficult to obtain information about products traded locally as semi-finished elements or components. As a consequence it is also difficult to evaluate what percentage of SPWPs is outsourced. Even if there is a growing share of semi-finished SPWPs being outsourced nationally or internationally, the tradition is that many SPWPs are elaborated "in house" and their integrated production cannot be tracked with accuracy by the national statistics offices which are responsible for collecting and processing industrial production and trade data.

Some trade and industry associations, at national or international level, publish data allowing evaluation of the importance of the various industrial sectors or sub-sectors. This is the case, amongst many others, of the European Panels Federation (EPF) and the Fédération Européenne du Parquet (FEP).

6.2.5 Volume, surface, length or value?

SPWPs can be measured in many ways, but in this report the flows of products are expressed in value. To be of some use, the evaluation of SPWP quantities can be made on a physical basis (volume, length or surface), but only for standard commodities or in reference to detailed specifications.

6.2.6 Geographic scope

This chapter considers the markets of the ECE countries, their trade (import and export) amongst themselves and with the rest of the world.

6.3 Main flows and trade patterns

6.3.1 Total trade

Furniture is by far the main product traded by ECE countries, both as importers and exporters (table 6.3.1)

6.3.2 The wood products sector

The United States and Germany are by far the largest importers of SPWPs, while Canada is the premier exporter (tables 6.3.2 and 6.3.3).

For each major importing and exporting country, breakdowns of imports and exports by products will be presented in the Discussion Paper.

TABLE 6.3.1

Imports and exports of SPWPs by ECE countries, 1998

(Value in million $)

	Imports	Exports
WOOD PRODUCTS		
Builders joinery & carpentry	4,765	4,889
Continuously shaped wood	1,969	1,423
Packing cases, pallets	1,070	1,098
Marquetry	846	261
Frames for pictures	508	186
Tableware	281	120
Barrels, casks	225	289
Tools and handles	141	111
Other articles of wood	2,114	1,537
Total	11,919	9,913
WOOD FURNITURE		
Upholstered seats	3,824	4,263
Chairs	1,490	849
Office furniture	1,572	1,758
Kitchen furniture	1,606	2,082
Bedroom furniture	2,872	2,733
Other wooden furniture	8,288	8,112
Total	19,653	19,797

Source: Comtrade, 2000.

Ranked by value, imports and exports show similar patterns, except for the cooper's products which are quite localized, both in production and imports (table 6.3.1),

Within the wood products sector, the value of trade in joinery and carpentry is the highest. It includes a wide range of products such as windows, doors, assembled flooring, concrete forms, shingles and shakes.

The main importers and exporters of each product will be presented in the Discussion Paper.

TABLE 6.3.2

Main importers of secondary wood processed products [1] (ECE countries), 1998 (million $)

United States	3,490
Germany	2,155
United Kingdom	949
France	617
Italy	600
Belgium and Luxembourg	539
Canada	529
Netherlands	456
Austria	403
Switzerland	371
Spain	301

1 Continuously shaped wood, builders joinery and carpentry, and other articles of wood.

Source : Comtrade, 2000.

TABLE 6.3.3

Main exporters of secondary processed wood products [1] (ECE countries), 1998 (million $)

Canada	1,671
United States	1,007
Germany	846
Italy	821
France	730
Sweden	600
Denmark	564
Poland	548
Austria	507
Belgium and Luxembourg	436
Spain	361
Netherlands	302
United Kingdom	279
Switzerland	110

1 Continuously shaped wood, builders joinery and carpentry, and other articles of wood.

Source: Comtrade, 2000.

6.3.3 Furniture

Furniture is a product with a high value-added ratio. In some types of furniture, the wood material used is the very core of the value of the piece of furniture but in others, like some upholstered chairs, the proportion of wood, in value and volume, is minimal while the piece of furniture is still classified under the heading "Seats, with wooden frames". Upholstered furniture has the highest trade value in the ECE, followed by bedroom, kitchen and office furniture (table 6.3.1).

The United States is the world's main importer of furniture (30% of the total import of ECE countries), followed by Germany and France (table 6.3.4). Italy is the leading exporter with 26% of the total exported (table 6.3.5).

TABLE 6.3.4

Main importers of furniture (ECE countries), 1998 (million $)

United States	5,955
Germany	3,256
France	1,729
United Kingdom	1,340
Belgium and Luxembourg	995
Switzerland	936
Netherlands	878
Austria	762
Canada	562
Norway	491
Sweden	379
Denmark	335

Source : Comtrade, 2000.

TABLE 6.3.5

Main exporters of furniture (ECE countries), 1998 (million $)

Italy	5,174
Germany	2,218
Canada	1,669
Denmark	1,558
Poland	1,408
France	960
Belgium and Luxembourg	914
United States	850
Spain	809
Sweden	692
United Kingdom	671
Austria	397

Source : Comtrade 2000.

For each major importing and exporting country, breakdowns of imports and exports will be presented in the accompanying Discussion Paper.

6.4 Market profiles

6.4.1 European Union

Since the negative results of 1993-1994, the EU15 balance of trade of SPWPs has been positive (graph 6.4.1). However in 1997, individually, only two products had a positive balance: coopers' products (barrels) and furniture, while wood mouldings, pallets and cases and joinery and carpentry were negative (graph 6.4.2). The EU's exports of SPWPs are in steady increase (graph 6.4.3).

The contribution of the furniture and seating (mainly Italian) is out of proportion with the other headings and has the major weight on the positive side (table 6.4.1 and graph 6.4.4).

Germany is the larger European furniture producer and consumer but Italy exports twice as much.

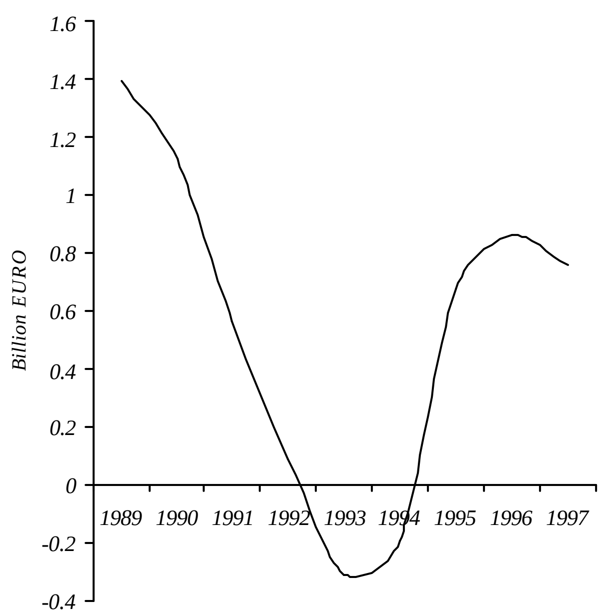
Several industrial sectors had a sustained growth in the recent years. This is the case in flooring, a minor sector in terms of the quantity of wood used, but in steady increase in production and trade (graph 6.4.5). The expansion of the wood flooring is driven by fashion and its anti-allergic benefits. The market is promising and the small percentage of wood flooring in Europe (4.7% in 1997) is expected to grow fast.

Multiple-layer (laminated) flooring has had a spectacular growth in recent years. Solid flooring is also growing at a lesser rate, while mosaic and laminated-parquet are nearly stagnant (graph 6.4.6).

Much of the supply of the flooring plants is traditionally bought in friezes (narrow, random-length strips).

GRAPH 6.4.1

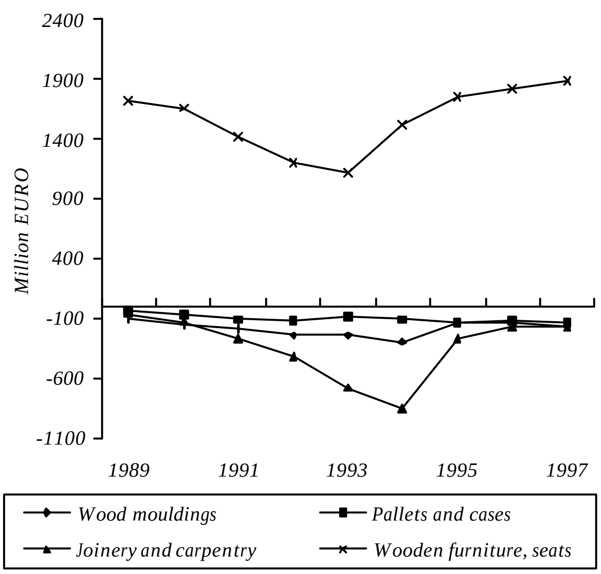
EU15 balance of trade for selected SPWPs, including wooden furniture, 1989-1997



Source : COMEXT, 1999.

GRAPH 6.4.2

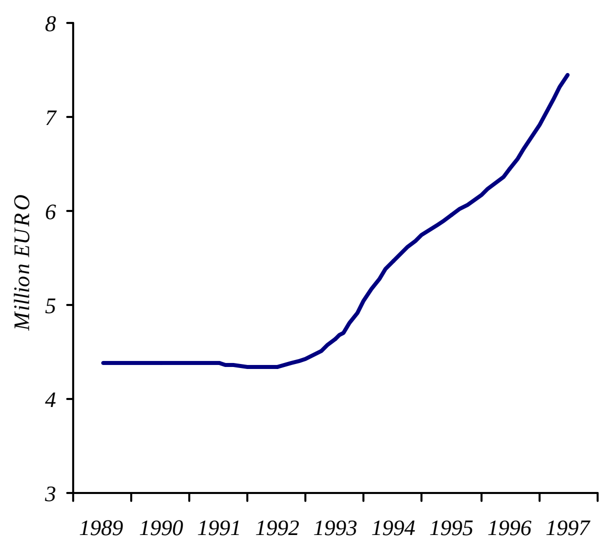
EU15 balance of trade, 1989-1999



Source : COMEXT 1999

GRAPH 6.4.3

EU15 exports of SPWPs, 1989-1997



Source : COMEXT, 1999.

Hardwood dimension[2] is now the supply of the most modern furniture plants, of which the high-productivity lines require prepared and homogeneous raw material.

The trade of continuously shaped wood is expanding in the EU (graph 6.4.7). In 1997, 40% of the total EU imports of profiled wood came from Indonesia and

TABLE 6.4.1

EU furniture market, 1998

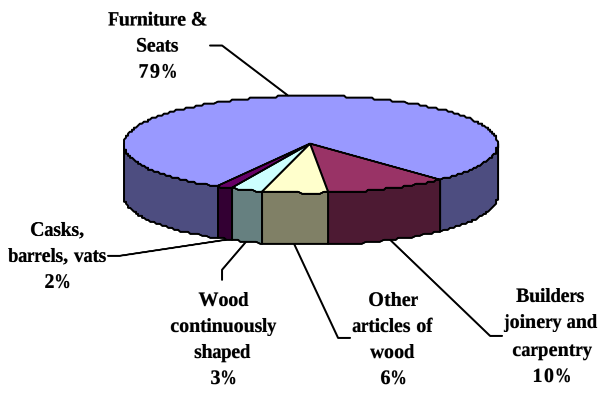
(Value in million euro)

	Production	Consumption	Imports	Exports
Austria	1,986	2,291	1,124	819
Belgium	1,887	2,470	1,727	1,144
Denmark	2,348	1,267	563	1,644
Finland	963	922	206	246
France	7,164	8,086	2,705	1,783
Germany	18,181	20,116	5,441	3,506
Greece	935	1,070	160	24
Ireland	310	402	192	100
Italy	15,189	8,529	606	7,266
Netherlands	2,194	2,907	1,224	510
Portugal	935	899	248	284
Spain	4,904	4,273	495	1,126
Sweden	1,634	1,212	643	1,065
United Kingdom	6,678	7,861	2,281	1,098
Total	65,308	62.305	17,615	20,615

Source : CSIL Milano (Furniture Industry Research Institute) as reported by the European Panel Federation, 1999.

GRAPH 6.4.4

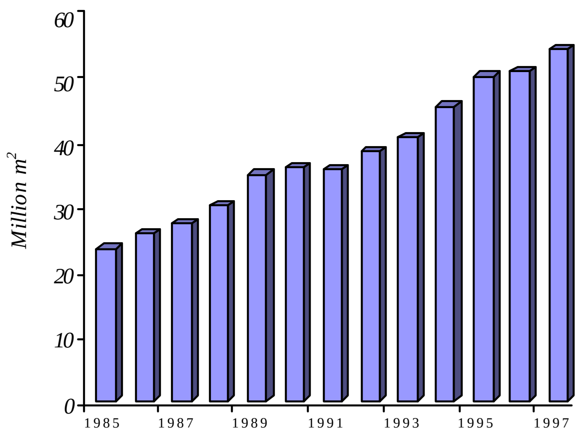
EU15 exports of SPWPs, 1997 breakdown by products



Source : COMEXT, 1999.

GRAPH 6.4.5

EU15 production of wood flooring, 1985-1997



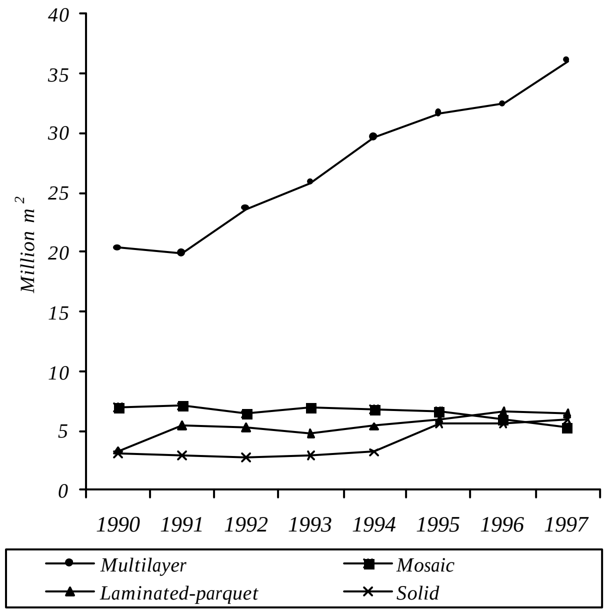
Source: Fédération Européenne du Parquet,1999.

[2] Dimension is a semi-finished piece of wood of fixed width, thickness and length, with specified tolerances of moisture content.

Malaysia. Several eastern European countries (e.g. Czech Republic, Croatia, Estonia and Romania) are making considerable progress in exporting profiled wood to the EU. Italy is the major European exporter of profiled wood, mainly hardwood.

GRAPH 6.4.6

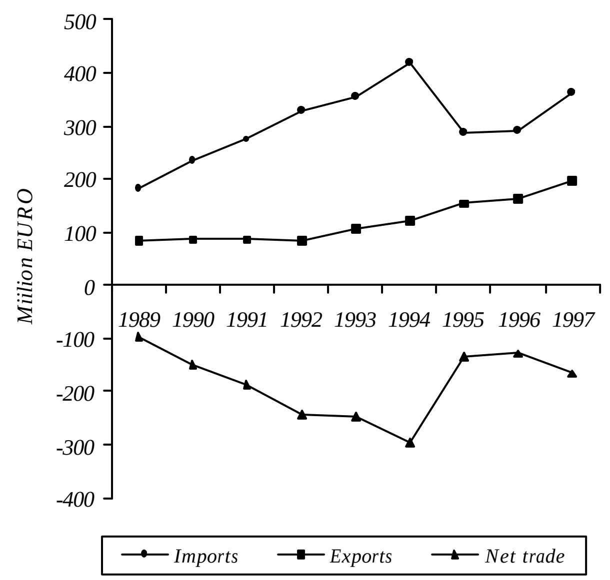
European wood flooring production by type, 1990-1999



Source : Fédération Européenne du Parquet, 1998.

GRAPH 6.4.7

EU15 trade of mouldings, 1989-1997

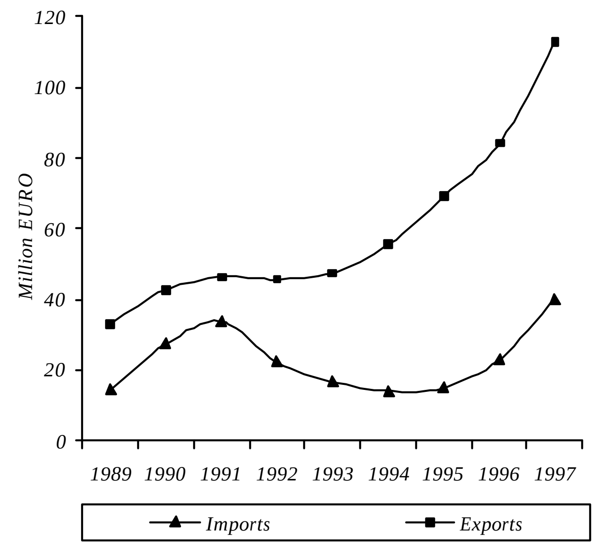


Source : COMEXT, 1999.

Another sector in continuous growth is the barrel industry (graph 6.4.8). France makes up 66% of the total ECE exports of coopers' products (barrels, casks and vats). In 1997, the French production represented more than 500,000 barrels, manufactured from 50,000 m^3 of staves, obtained from 250,000 m^3 of high quality logs (Annuaire des Industries du Bois, Union des Industries du Bois, 1999).

GRAPH 6.4.8

EU15 trade of barrels, 1989-1997



Source : COMEXT, 1999.

6.4.2 United States

As shown before, the United States is the largest importer of SPWPs, including furniture, and the second largest exporter behind Canada. The two groups with the highest trade value are continuously shaped wood (mouldings) and joinery and carpentry (graphs 6.4.9 and 6.4.10).

Since 1991, both imports and exports have been in constant growth, with a negative balance of trade for all SPWPs (graph 6.4.11). The United States is a net importer of furniture: \$6.0 billion imported in 1998 versus \$850 million exported.

Amongst the wood products, two items, joinery and carpentry and continuously shaped wood account for around 60% of imports and exports (table 6.4.2).

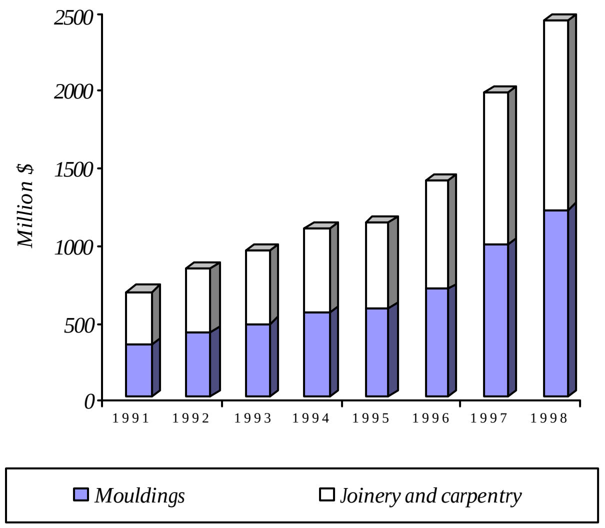
Canada is by far the main supplier of joinery and carpentry with 73% of the value of exports to the United States in 1998 (table 6.4.3). Other Central and South American countries account for 11%.

Canada is also the main supplier of profiled wood with 29% of the supply in 1998, followed by Chile (18%)

(table 6.4.4). Other Central and South American countries account for 25%.

GRAPH 6.4.9

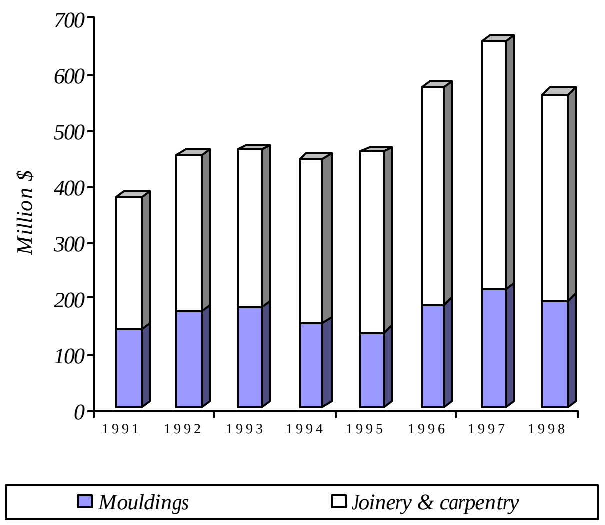
United States imports of SPWPs, 1991-1998



Source : Comtrade, 2000.

GRAPH 6.4.10

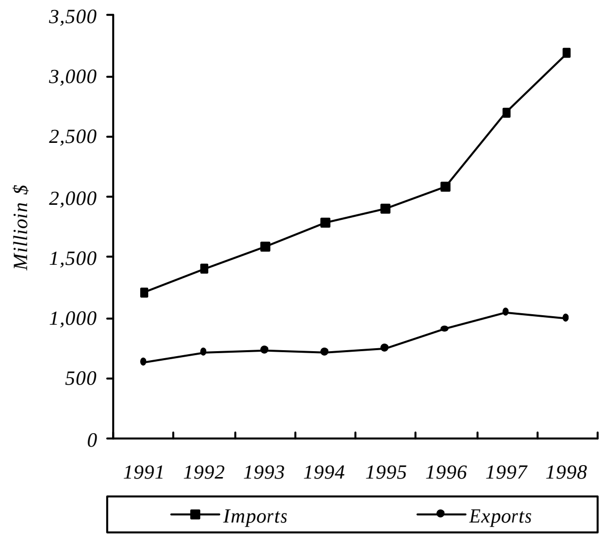
United States exports of SPWPs, 1991-1998



Source: Comtrade, 2000.

GRAPH 6.4.11

United States trade of SPWPs, excluding furniture 1991-1998



Source : Comtrade, 2000.

TABLE 6.4.2

United States, SPWP imports, excluding furniture ,1998 ranked by value (Million $)

Builders joinery & carpentry	1,212
Other articles of wood	743
Continuously shaped wood	695
Marquetry	199
Packing cases, pallets	113
Barrels, casks	104
Tableware	86
Tools and handles	41

Source : Comtrade, 2000.

TABLE 6.4.3

Main exporters of joinery and carpentry to the United States, 1998 (Million $)

Canada	891
Indonesia	50
Mexico	39
Brazil	35
Malaysia	31
Chile	26
Costa Rica	22
Sweden	15
China	12

Source : Comtrade, 2000.

TABLE 6.4.4

Main suppliers of profiled wood to the United States, 1998

(Million $)

Canada	203
Chile	124
Mexico	98
Indonesia	62
Brazil	59
Malaysia	34
New Zealand	30
Italy	16
China	13
Argentina	7

Source: Comtrade, 2000.

TABLE 6.4.5

United States, SPWP exports 1998

(Million $)

Builders joinery & carpentry	366
Continuously shaped wood	188
Other articles of wood	180
Marquetry	98
Barrels, casks	70
Packing cases, pallets	55
Tableware	18
Tools and handles	18

Source: Comtrade, 2000.

6.5 Conclusion

In the ECE region the trade in SPWPs is growing faster than trade in primary products. Many major forest products producers are seeking to maximize value-added processing and minimize exports of primary products. This trend is particularly evident in tropical countries. Trade, and especially production, of SPWPs will continue to be difficult to measure due to difficulties in identifying the portion of wood in final products. Nevertheless the increasing importance of secondary processing merits attention as a focus on only primary-processed products gives too narrow a view on wood products production, consumption and trade in the ECE region.

In addition, some manufacturers are integrating primary processing into their production of SPWPs in order to control raw material supply. Conversely primary product manufacturers, such as sawmills, are investing in value-added processing, for example in manufacturing hardwood dimension. This vertical integration of primary and secondary operations is an important structural change in the sector. One consequence is that statistics on primary processing, e.g. sawnwood produced, only give a partial picture of reality. This is again an impetus to follow more closely the production and trade of SPWPs.

A Geneva Timber and Forest Discussion Paper is envisaged in 2000 in which the author will expand on the topics addressed in this chapter.