

**The Wood Household Furniture and Kitchen Cabinet Industries:  
A Contrast in Fortune**

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## **The Wood Household Furniture and Kitchen Cabinet Industries: A Contrast in Fortune**

### **Abstract**

In 1977, the value of wood household furniture shipments exceeded kitchen cabinet shipments by 170 percent; conversely in 2006, shipments of cabinets exceeded shipments of furniture by 78 percent. The most apparent reason for the decrease in domestic furniture shipments is the dramatic increase in furniture imports since 1999 whereas cabinet demand has increased due to the popularity of larger kitchens and robust investments in housing prior to 2006. However, there also are less apparent factors. Furniture is primarily sold to consumers from retail stores, whose buyers have ordered previously from manufacturers at semi-annual furniture markets. A growing volume of cabinets are designed and ordered by consumers at home improvement centers. Furniture manufacturers carry large volumes of finished products in inventory, while cabinet manufacturers carry low inventories. Furniture has become a quasi-commodity that is priced within narrow ranges whereas sale methods for semi-custom and custom cabinets' allow consumers to order the species, finishes, and features they want. The price competitiveness of the furniture industry has allowed imports to become the major source of product available to the consumer.

**Key Words:** Wood furniture, kitchen cabinets, inventory control

## Introduction

In 1977, the deflated value of product shipments (shipments) of wood household furniture (furniture) exceeded those of wood kitchen cabinets (cabinets) by 170 percent (Table 1). As the decades progressed, the value of domestic furniture shipments fluctuated while shipments of cabinets trended upward. In 2002, shipments of cabinets were identical to the shipments of furniture (Fig. 1). Shipments of cabinets continued to increase over the next 4 years while furniture shipments decreased; by 2006, shipments of cabinets exceeded shipments of furniture by 78 percent (Fig.1). This change elevated cabinet producers from being a relatively minor consumer of hardwood lumber in 1977 to being the largest user of graded hardwood lumber (Luppold and Bumgardner 2008).

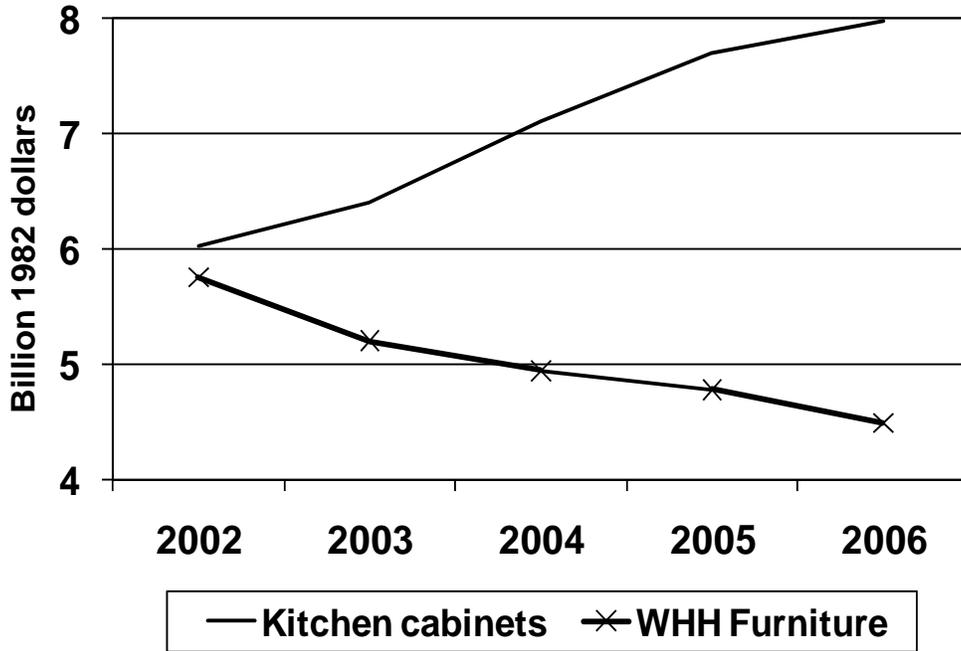
Table 1 – Value of product shipment for the wood household furniture and kitchen cabinet (excluding countertops) industries and volume of lumber consumed by these industries in 1977, 1982, 1987, 1992, 1997, and 2002.

Year	Value of product shipments		Volume of hardwood lumber consumed <sup>1</sup>	
	Wood household	Kitchen cabinets	Wood household	Kitchen cabinets
	-----millions of 1982 dollars <sup>1</sup> -----		-----millions of board feet <sup>2</sup> -----	
1977	5,816 <sup>3</sup>	2,245 <sup>4</sup>	1,783	288
1982	4,846 <sup>5</sup>	2,001 <sup>6</sup>	1,613	312
1987	6,360 <sup>7</sup>	3,844 <sup>8</sup>	1,781	550
1992	5,750 <sup>9</sup>	3,698 <sup>10</sup>	1,546	898
1997	6,409 <sup>11</sup>	4,086 <sup>12</sup>	1,592	1,266
2002	5,754 <sup>11</sup>	6,019 <sup>12</sup>	1,248	1,367

- 1 USDL Bureau of Labor Statistics. 2008. 1982 dollar. Series Id: WPU1212 for furniture and WPU08210101 for cabinets
- 2 Luppold and Bumgardner 2008
- 3 USDC Bureau of the Census 1980b
- 4 USDC Bureau of the Census 1980a
- 5 USDC Bureau of the Census 1985b
- 6 USDC Bureau of the Census 1985a
- 7 USDC Bureau of the Census 1990b
- 8 USDC Bureau of the Census 1990a
- 9 USDC Bureau of the Census 1995b
- 10 USDC Bureau of the Census 1995a
- 11 USDC US Census Bureau 2004b
- 12 USDC US Census Bureau 2004a

<sup>1</sup> In 1997 the Bureau of the Census changed the kitchen cabinet designation to include countertops. In an effort to be historically consistent, the countertop portion of the value of product shipment has been deducted from total value shipments in Table 1 and Figure 2.

Figure 1. —Value of product shipments of wood household furniture and kitchen cabinets (excluding countertops) industries from 2002 to 2006 in constant 1982 dollars.



Sources:

USDC US Census Bureau 2003. Years 2000 and 2001

USDC US Census Bureau 2006a. Years 2002, 2003, and 2004

USDC US Census Bureau 2008a. Years 2005 and 2006

USDL Bureau of Labor Statistics 2008. 1982 dollar. Series Id: WPU1212 for furniture and WPU08210101 for cabinets.

The most apparent reason for decreased domestic furniture shipments is the 71- percent increase in furniture imports since 2001 (Cochran 2008). By contrast, cabinet demand has increased with new homes construction and an increase in kitchen remodeling. These changes caused the value of product shipments plus net imports of kitchen cabinets (including countertops) to exceed the value of product shipments plus net imports of wood household furniture by 2006. However, less apparent factors are involved with the manufacturing and distribution processes of these products that also have contributed to the changes in their respective fortunes. The objectives of this paper are to examine the furniture and cabinet industries from 1977 to the current decade with respect to production and marketing processes, business inventories, and to discuss how these factors have interacted to influence wood-based material consumption.

## Two Similar but Different Industries

While furniture and cabinets are made from comparable materials using similar equipment, the histories, manufacturing facilities, and manufacturing methods associated with these two products differ. Evidence of wooden tables and chairs can be traced back over 6,000 years to Egypt (Bridgwater and Kurtz 1963), and chests of drawers can be traced back to the middle 17th century (Blackburn 2008). By contrast, the first product expressly designed to store food and kitchen equipment was the Hoosier cabinet, initially manufactured in 1903 (KCMA 2005). The first wall mounted kitchen cabinet associated with modern kitchens was constructed in the early 1920s (KCMA 2005).

The relative age of furniture and cabinets as products and the different growth rates in the value of shipments of these products have influenced the relative age and design of manufacturing facilities. Although some U.S. furniture plants were built in the last 20 years, most of the furniture plants in the eastern United States were built before 1970. In general, furniture manufacturing facilities in the eastern United States are (or were) highly integrated with drying facilities, rough mills, plywood plants, and assembly operations located in one plant, a cluster of plants at one site, or at several plants at multiple sites. Some wood furniture operations also own particle board or other panel product manufacturing facilities.

Before WWII, most wood kitchen cabinets were produced in local shops. although larger cabinet facilities serving regional markets were built in the 1950s, most of the plants in operation today were built after 1970. Cabinet plants that manufacture lower cost stock cabinets can be similar to large furniture plants in that they purchase green lumber and fabricate cabinets in one facility or in a system of facilities. Unlike larger furniture operations, however, large cabinet manufacturers purchase most of their plywood and other panel products from outside sources. Stock cabinet plants that produce multiple product lines also tend to batch production orders into lots that can be produced in a week or less (Raymond 2009).

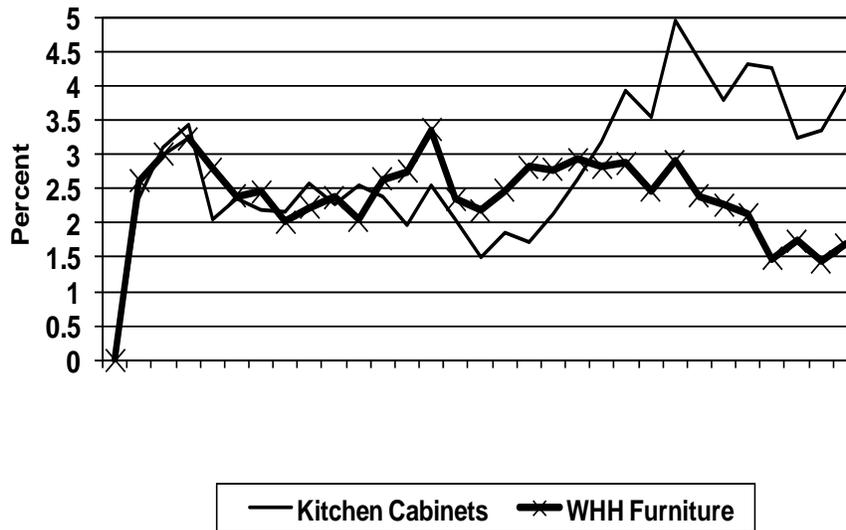
Plants that manufacture semi-custom and custom cabinets tend to be less integrated and purchase higher volumes of kiln dried lumber and dimension (lumber that fabricated into a rough or finished cabinet or furniture part) from outside sources. In general, the more species that a cabinet plant processes, the greater the volume of dimension purchased from wood component manufacturers. The wood component industry has developed just-in-time production and delivery processes to meet the demands of cabinet manufacturers (Raymond 2009)

The growth in cabinet demand allowed this industry to invest in plants and equipment to produce smaller lots, and new capital expenditure has increased in recent years (Fig. 2). By contrast, as imports became an important part of the product line for many domestic furniture companies in the 1990s, capital investment decreased (Fig. 2). This meant that the computer numerically controlled equipment needed to produce smaller lots of product were purchased by cabinet manufacturers but were not purchased by furniture producers (Raymond 2009).

Figure 2 – New capital expenditures by the wood household furniture and kitchen cabinets and countertop industries as a percentage of value of product shipments, 1977 to 2006

USDC Bureau of the Census 1995b. Years 1977 to 1992

USDC Bureau of the Census 1995a. Years 1977 to 1992



USDC Bureau of the Census 1998. Years 1993 to 1996

USDC US Census Bureau 2004b. Years 1997 to 2002

USDC US Census Bureau 2004a. Years 1997 to 2002

USDC US Census Bureau 2006b. Years 2003, and 2004

USDC US Census Bureau 2008b. Years 2005 and 2006

USDL Bureau of Labor Statistics 2008. 1982 dollar. Series Id: WPU1212 for furniture and WPU08210101 for cabinets.

In some respects furniture has become a commodity in that it is priced within narrow ranges (price points) depending on the level of quality. Although a small but growing amount of furniture is custom made to buyer specification as exemplified by the custom portion of the Amish furniture industry (Bumgardner et al. 2008), a large volume of furniture is sold at the furniture markets in High Point, North Carolina or Las Vegas.<sup>1</sup> At these markets furniture prototypes are shown to retailers and wholesalers who then order the suites or pieces they think will appeal to their consumers. Sometimes domestic furniture manufacturers have a limited volume of product already manufactured, but in recent years most of the furniture has been manufactured after it has been ordered. However, because most of the wood household furniture is sold in suites, furniture manufactures have to warehouse portions of these suites until all pieces are built.

<sup>1</sup> While many domestic and off shore manufactures sell their products at the furniture market, furniture can be sold directly to customers at company controlled stores (examples Ethan Allen and Ikea) or purchased directly by mass marketers (example Wal-Mart).

The marketing process for kitchen cabinets has evolved over time. Before to WWII, most cabinets were purchased by the home builder or the homeowner. In the 1950s, the concept of stock cabinets emerged. These cabinets are built using standardized width dimensions in 3 inch increments. Normally stock cabinets featured one species and one finish. The emergence of the stock cabinet allowed manufacturers to build and warehouse cabinets, resulting in much quicker delivery. Initially the points of sale for stock cabinets for homeowners were small shops that would install the cabinets and fabricate and install countertops. Small contractors also could purchase stock cabinets at these shops but large contractors could buy direct from manufacturers or through a wholesaler.

The distribution of cabinets began to change after 1979 when Home Depot started to redefine traditional construction supply yards into home improvement centers (KCMA 2005). Initially these centers carried a few lines of stock cabinets and later provided displays of stock cabinets with a limited number of options. Today, home improvement stores carry one or two lines of stock cabinets and several displays of semi-custom cabinets. Manufacturers of semi-custom cabinets offer numerous styles and species in a multitude of finishes. In addition, the consumer can select upgrades in box construction ranging from plastic cover particleboard to  $\frac{3}{4}$  inch hardwood plywood. Orders for these cabinets go directly to the manufacturer, and the finished product is delivered to the homeowner or contractor. Cabinets also have a financial advantage over furniture because the cost of cabinets in new homes can be included in the mortgage.

### **Changes in Business Inventories**

An examination of business inventories provides useful information on how fast working capital moves through the production processes and where inventories tend to build up in the process (Cumbo et al. 2006). Older industrial models specify high output machinery to reduce cost, and large volumes of inventory act as a buffer in the event of a shortage disruption in the manufacturing process. Modern industrial models including just-in-time manufacturing attempt to minimize the volume of materials and products held on site in an effort to minimize the interest costs of holding such capital. Modern industrial models also allow for more flexibility in the manufacturing processes because specific material can be obtained to service a specific order. In the case of custom and semi-custom cabinet; advance inventories of finished product can not be held.

In 1977, business inventories held by furniture manufacturers were equivalent to nearly 20 percent of the value of shipments while inventories held by cabinet producers represented 13 percent of the value of shipments (Table 2). Forty percent of the business inventories held by furniture manufacturers' were finished goods compared to 25 percent for cabinet manufacturers. The relatively large volume of finished goods held by furniture manufacturers reflects the tendency of these manufacturers to warehouse incomplete suites.

Table 2 – Total inventory, inventory of finished goods, value of work in progress, and inventory of materials and supplies as a percentage of total shipments for the wood household furniture and kitchen cabinet and countertop industries, 1977, 1982, 1987, 1992, 1997, and 2002.

Year	Industry	Total business inventories	Finished goods	Work in progress	Materials and supplies
-----percent of total shipments-----					
1977 <sup>1</sup>	Wood household	19.8	7.9	4.7	7.3
1977 <sup>2</sup>	Kitchen cabinets	13.3	3.3	3.3	6.7
1982 <sup>3</sup>	Wood household	23.0	10.8	5.3	6.9
1982 <sup>4</sup>	Kitchen cabinets	13.9	3.2	3.1	7.7
1987 <sup>5</sup>	Wood household	19.4	8.7	4.4	6.3
1987 <sup>6</sup>	Kitchen cabinets	10.2	2.1	2.7	5.9
1992 <sup>7</sup>	Wood household	20.4	9.9	4.2	6.3
1992 <sup>8</sup>	Kitchen cabinets	9.9	1.9	2.7	5.3
1997 <sup>9</sup>	Wood household	19.1	9.1	3.8	6.2
1997 <sup>10</sup>	Kitchen cabinets	9.4	2.3	2.3	4.8
2002 <sup>9</sup>	Wood household	17.0	9.2	3.0	4.8
2002 <sup>10</sup>	Kitchen cabinets	6.8	1.5	1.8	3.5

- 1 USDC Bureau of the Census 1980b
- 2 USDC Bureau of the Census 1980a
- 3 USDC Bureau of the Census 1985b
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- 9 USDC US Census Bureau 2004b
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Between 1977 and 2002, business inventories held by furniture manufacturers relative to the value of shipments declined by approximately 15 percent (Tables 1 and 2). The decline in inventories by furniture manufacturers resulted from reductions in work in progress and in materials and supplies. However, finished furniture held in inventory in 2002 was equivalent to 9.2 percent of the value of shipments, an increase over 1977 levels but an improvement over 1982 (a recession year) levels. Inventories held by cabinet manufacturers relative to the value of shipments declined by nearly 50 percent between 1977 and 2002 (Tables 1 and 2). The decline occurred in all categories (finished goods, work in progress, and material and supplies) by a similar amount. This decline occurred as the production of semi-custom cabinets increased relative to stock cabinets and batching of stock cabinet production in smaller lots.

## **Conclusion**

In 1977, the value of furniture shipments exceeded cabinet shipments by 170 percent, but by 2006 shipments of cabinets exceeded shipments of furniture by 78 percent. This change is surprising given that furniture and cabinets are made from comparable materials using similar production procedures. The most apparent reason for the decrease in domestic furniture shipments is the dramatic increase in furniture imports since 1999, while cabinet demand has increased due to new homes construction and an increase in kitchen remodeling. However, less apparent factors are involved with the distribution and manufacturing processes associated with these industries that also have contributed to the changes in their respective fortunes.

Furniture has been produced in some form for thousands of years; the modern kitchen cabinet is less than a century old. Furniture is primarily sold to consumers from stores, which first order the products from manufacturers at furniture markets; while growing volumes of cabinets are directly ordered by consumers at home improvement centers. Furniture manufacturers carry large volumes of finished product so that complete suites of furniture are available to retailers, and they also carry relatively large inventories as work in progress and material and supplies. In 2002, cabinet producers carried 60 percent less business inventories than furniture manufacturers and 84 percent less finished goods in inventories. Because of differences in the manufacturing and distribution processes, furniture has become a commodity that is priced within narrow ranges depending on quality. The price competitiveness of the furniture industry has allowed imports to become the major source of product available to consumers. By contrast, while semi-custom and custom cabinets allow consumers to order the species, finishes, and features they want.

While it is difficult to projecting the future of any wood product industry in a volatile world economy, the industrial model adopted by the kitchen cabinet industry has a higher probability of success than that of the domestic furniture industry. It allows consumers to choose what they want thus customizing their order, incorporates a flexible production process, keeps business inventories at a minimum, and facilitates just-in-time manufacturing. Still, there is hope for a reemergence of the domestic furniture industry as the Amish furniture sector demonstrates that semi-custom furniture can be built in the United States. Furniture demand may also increase in the future once mortgages are paid off or become a lower portion of the consumer income, which will allow for the purchase of higher quality or semi-custom furniture. Furthermore, as the cost of manufacturing increases in China, the cost of transporting large volumes of furniture over a great distance may facilitate greater domestic production.

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