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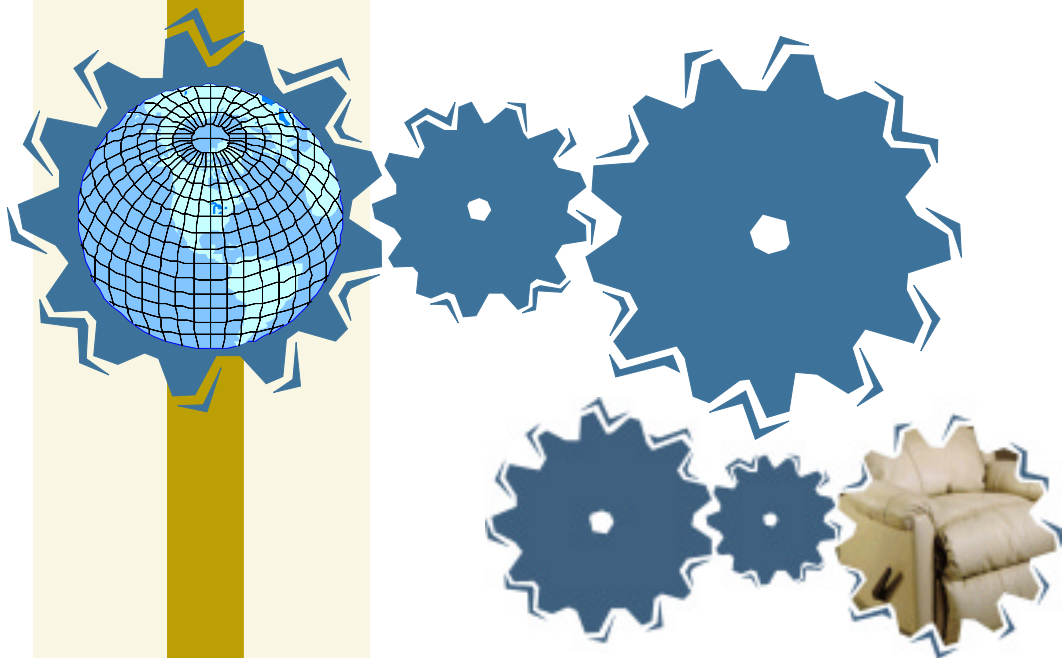
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Innovate or Evaporate ...

**Business Concept Innovation in the Furniture Industry
in the Age of Information**



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The **Forest and Wildlife Research Center** at Mississippi State University was established by the Mississippi Legislature with the passage of the renewable natural resources act of 1994. The mission of the Center is to conduct research and technical assistance programs relevant to the efficient management and utilization of the forests, wildlife, and fisheries of the state and region, and the protection and enhancement of the natural environment associated with these resources. FWRC scientists conduct this research in laboratories and forests administered by the University and cooperating agencies and industries throughout the country. Research results are made available to potential users through the University's educational program and through Center publications such as this, which are directed as appropriate to forest landowners and managers, manufacturers and users of forest products, leaders of government and industry, the scientific community and the general public. Dr. G. Sam Foster is Director of the Forest and Wildlife Research Center.

The **Institute of Furniture Manufacturing and Management** is an inter-unit, collaborative effort within Mississippi State University – including the College of Forest Resources / Forest and Wildlife Research Center, the College of Business and Industry, the College of Engineering, the School of Architecture, and the MSU Extension Service. The primary mission of the Institute is to enhance the long-term competitiveness and prosperity of the furniture industry in Mississippi and the U.S. by expanding the fundamental and applied knowledge of furniture production and management, by transferring new knowledge to the industry, and by enhancing workforce capabilities. The Institute's web site is at <http://www.ifmm.msstate.edu>

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FP 228**

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Mississippi State University**

Innovate or Evaporate...

Business Concept Innovation in the Furniture Industry in the Age of Information

By Steven H. Bullard

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Introduction

The U.S. furniture industry has changed dramatically in recent years. Furniture *manufacturers*, for example, have recently faced competition from foreign producers that has been particularly intense – resulting in factory closings and job losses in many areas of the country, including the Mid-South. In Mississippi, for example, the number of employees in furniture and fixtures industries dropped by 2,100 (6.8%) in the year 2000 (Center for Policy Research and Planning 2001). Similar job losses have been occurring in Tennessee, Virginia, North Carolina and other important furniture-producing states. Nationwide, employment in furniture and fixtures manufacturing dropped by 40,000 (7.2%) from August of 2000 to August of 2001 (USDL Bureau of Labor Statistics 2001).

While furniture manufacturers have been facing more competition from abroad, U.S. furniture *retailers* have also been experiencing

significant change. During the 1990s U.S. furniture demand was strong, yet important “traditional” furniture retailers like Heilig-Meyers, Levitz, Montgomery Ward and others experienced financial difficulties. Several of the nation’s largest retailers of household furniture filed for Chapter 11 bankruptcy protection during a time when U.S. consumers were buying furniture at record levels.

What has been happening in furniture manufacturing and retailing, and where is this important industry headed? This article explores competition and innovation issues, and discusses three broad topics under the heading “business concept innovation.” The purpose of this discussion is to help firms in the furniture industry develop strategies for success in a new business environment, one that has been and is being fundamentally changed by the information technologies of the 21st century.

Competition and Innovation

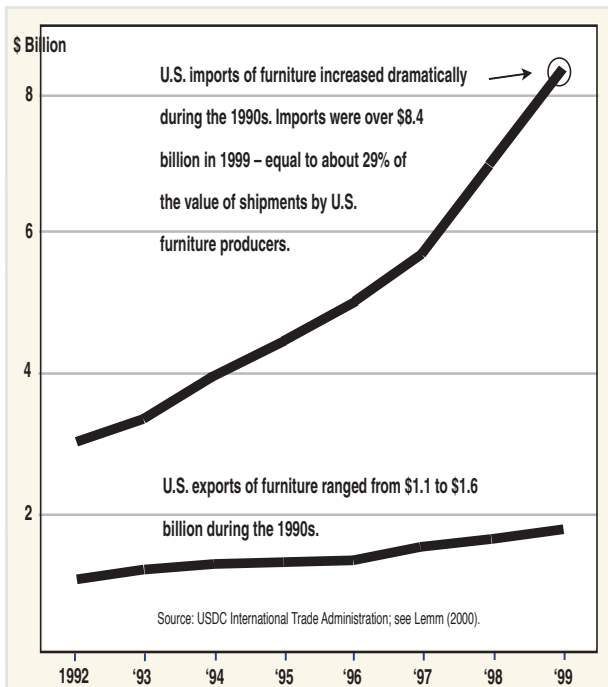
New competition from foreign furniture manufacturers is clearly illustrated by significant increases in U.S. imports of household furniture between 1992 and 1999 (Figure 1). Some of the reasons for the increases are listed in Figure 1; these and other reasons are discussed by Bullard and West (2002) and Schuler *et al.* (2001).

Increased market share by foreign furniture producers has caused some U.S. firms to decrease production by closing facilities and laying off workers. Popular “catch” phrases like “evolve or dissolve” and “innovate or evaporate” have recently been used to communicate the need for firms to be innovative and flexible in meeting changes in the business environment (Tyson 1997). It has long been recognized, however, that *innovation* is essential for firms to survive in highly competitive markets. Schumpeter, for example, stated in 1939:

“Like human beings, firms are constantly being born that cannot live. Others may meet what is akin, in the case of man, to death from accident or illness. Still others die a ‘natural’ death, as men die of old age. And the ‘natural’ cause, in the case of firms, is precisely their inability to keep up the pace in innovation which they themselves had been instrumental in setting in the time of their vigour.” (Emphasis added.)

Schumpeter’s words resonate today. Firms must “keep up the pace in innovation” to survive in the long term, but today there is an important difference – the “pace” is much faster in the information age. With instantaneous, global information technologies available at low cost, new developments in an industry are diffused and implemented much more quickly than at any time in the past; “keeping up the pace” must be a continuous process of innovation and adaptation to new

Figure 1. U.S. imports and exports of household furniture, 1992 – 1999 (adapted from Bullard and West 2002).



Why was there a dramatic rise in U.S. furniture imports during the 1990s?

- Information technologies provided better communication between consumers and producers, and between furniture producers and raw materials suppliers.
- Containerized shipping has lowered international transportation costs, and compressed packaging technologies have lowered damage from shipping. Also, consumer acceptance has been high for easily-shipped “knock-down” and “ready to assemble” furniture.
- Many political barriers to international trade have been removed or reduced.
- The U.S. market has been a “magnet” for furniture imports. The market was huge and expanding during the 1990s – due to the nation’s strong economy during the decade, and also because of demographics. Seven-six million “baby boomers” reached peak age classes for furniture buying during this decade of economic expansion.
- The dollar has been relatively high in value compared to many other currencies, making imported furniture less expensive to U.S. consumers and making U.S. produced furniture more expensive in other countries.

technologies, trends, and conditions. Surviving firms will be those that best adapt to new information technologies, a process that has been called “digital Darwinism” (Schwartz 1999).

Business Concept Innovation

Surviving firms in the furniture industry will be innovators, but competitive success through innovation is no longer simply a matter of having the lowest cost raw materials, labor, and other inputs, or a matter of which firms develop and implement new manufacturing processes and technologies most rapidly and efficiently. Rapid diffusion of new information and industry “benchmarking” practices tend to create parity in these competitive factors relatively quickly. Today, perhaps the most important competition is among “business concepts” – and innovative business concepts are fast evolving in many industries as a result of new information technologies. A few examples of business concept innovation that were recently highlighted by Hamel (2000) are listed in Figure 2.

While most of the examples cited by Hamel are information-based industries and companies, IKEA, a furniture company, is one of the examples of what he calls an “industry revolutionary.” IKEA is a non-traditional furniture company that has had a very high rate of growth – created in 1943, by 1999 the Swedish firm had 53,000 “co-workers across a global network of 150 stores in 29 countries” (www.ikea-usa.com 2001). This company has been successful while other, more traditional furniture companies have not succeeded in the U.S.

The following discussion does not focus on IKEA, however, or on any other specific firm in the furniture industry. Rather the discussion is broad-based, centered on three topics that can help firms develop innovative business models in the furniture industry in the “age of information:”

- 1. Replace inventory with information**
- 2. Develop alliances and partnerships**
- 3. Build customer loyalty aggressively**

Figure 2. Examples of “business concept innovation” highlighted by Hamel (2000). [Each of the items below is quoted directly from *Leading the Revolution* by Gary Hamel (2000).]

- “Buying insurance via the Internet is a radically different business model from going to a physical agency. You can instantly compare policies and be sure you are getting the very lowest price.”
- “Over the last couple of decades, banks have lost nearly half their share of U.S. household financial assets to newcomers such as Fidelity and Charles Schwab. Bankers looked at customers as savers; the mutual fund industry knew we were investors, too.”
- “IKEA has a high-volume business model for selling affordable home furnishings that is quite unlike that of a traditional furniture store. For one thing, you can take the furniture home with you. For another thing, you get great design at minimalist prices.”
- “Hughes’ highly successful DirecTV service is built on a business model that has no parallel in the old world of network broadcasting: hundreds of channels, programming menus, pay-per-view, and more besides.”

These topics relate to both marketing and manufacturing, but they are not specific guides on how to “do things right” in the furniture industry. Rather they are strategic guides to “doing the right things” in an era when suppliers, producers, distributors, and consumers of furniture have the ability to send and receive “rich” information instantaneously, worldwide, and at a very low cost. Detailed information is now widely available at low cost in “real time,” and it can be stored, accessed, and used strategically by furniture producers, sellers, and buyers on a continuing basis.

1. Replace inventory with information

An excellent example of a business model that replaces inventory with information is that of Dell Computer Corporation. Dell’s business model has three basic steps, as shown in Figure

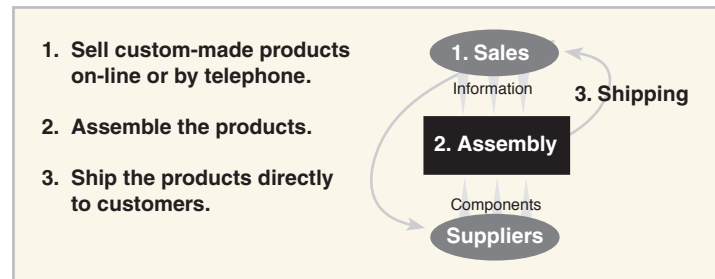
3 [More information on this model is provided by Bullard and West (2002) and Schwartz (1999).]

Dell's business model has no sales staff because the ordering process is automated. The model also saves money because parts that are provided by suppliers are not owned by Dell until they are taken from the suppliers' trucks and used in the assembly of a customer-ordered computer. As orders for customer-specific computers arrive, the information is shared with suppliers in real time over computer networks – thus allowing replenishment to take place on an “as needed” basis. Dell doesn't pay for the parts until they are used, and the firm has a “negative cash conversion” of five business days, i.e., customers pay for their computers, on average, about a week before the money goes out to the suppliers of parts for those same computers.

Inventory is effectively replaced with information in this customer-driven “pull” system of mass customization. Another important advantage of Dell's business model, however, is that the firm has a direct relationship with individual customers – a relationship that can be developed and used later by selling add-on products and services, and new or upgraded computer hardware and software. (This type of advantage is discussed in topic 3. Build customer loyalty aggressively.)

Dell's approach to computer manufacturing and marketing may be difficult to envision on a large scale in household furniture markets, where consumers often want to touch the furniture before purchase, particularly with upholstered household furniture. The approach is viable, however, for relatively specialized homefurnishings like customized furniture produced for micro-markets. It is also relevant to producers of “contract” or “institutional”

Figure 3. Three steps in Dell Computer Corporation's business model.



furniture, where quantities ordered can be large and the product is relatively standardized in quality, appearance, and function compared to household furniture. In the contract furniture industry, the potential for customer-direct sales through e-commerce has been what Christensen (1997) calls a “sustaining” or value-enhancing technology.

Dell's business model is “extreme” in the sense that it replaces inventory with information to the maximum extent. There are, however, other approaches and means to replace inventory with information that are less extreme. “Lean” manufacturing techniques involving just-in-time supply and continuous flow processes effectively reduce “work in process” inventory by providing information in real time to internal and external suppliers. Lean manufacturing techniques are being implemented in many U.S. furniture production facilities today, following the lead of automobile manufacturers in mass customization efficiencies.

“Lean” retailing has also spread as a business concept innovation that replaces inventory with information. According to Abernathy et al. (1999), for example, in the apparel industry:

“The lean retailer of apparel collects information from its stores on sales of particular products at the style, size, and color level, compiling that information at the end of the week – usually on Sunday

night after weekend sales are known. It then transmits an electronic order to the appropriate supplier on the same night. On Monday or Tuesday, the supplier ships the product ordered in containers that can be electronically scanned at the retailer's distribution center. The shipment, unloaded at this center, moves through an automated sequence of scanning, weighing, and routing. At another bay of the distribution center, a truck is loaded, destined for the store requiring replenishment. By Wednesday or Thursday, shipping clerks at the store unload the truck and stock their shelves. Apparel items move without being touched by human hands from the time they are loaded into a container by a supplier to unloading at a specific retail store."

While furniture retailers may not achieve this level of automation, it is true that business models are changing in the furniture retailing industry. In the near-term, customer-direct e-commerce will likely grow in addressing consumer demand for relatively specialized products. Niche markets may grow in importance, and opportunities may therefore increase for relatively small firms to prosper through Web-based sales (Bullard and West 2002).

Overall, the number of "bricks and mortar" furniture retail stores has been declining in the U.S., while the size of stores has increased. From 1992 to 1997, for example, the number of furniture-related business establishments declined by almost 10%, while the average size of establishment increased significantly (USDC Census Bureau 2000). Firm size is not the primary criterion for success in furniture retailing, however, as indicated by the financial difficulties of some of the nation's largest furniture retailers during the 1990s – a decade of strong demand for household furniture.

In the "age of information" innovative business models in the furniture industry may have

significant attributes that were not part of the strategy of industry giants like Heilig-Meyers. They may involve relatively large-scale establishments that use information technologies to control inventories, for example, but it is easy to envision fast growth for "bricks and clicks" retailers – large-scale stores partnered with internet-based search engines and information-sharing alliances with suppliers and service providers. Some of the general reasons for such alliances are discussed next, including specific examples from the furniture industry.

2. Develop alliances and partnerships

In today's globally contestable markets, strategic "alliances," "partnerships," "networks," and "coalitions" are becoming an important aspect of business success. Partnering may be necessary to enter a specific market. In some countries, for example, partner firms are necessary to gain market access. Alliances can also help ensure that suppliers and producers attain common goals, and they can reduce the uncertainty of entering a new product market or geographic area. Alliances can also broaden consumer demand and provide access to skills or knowledge that may be concentrated in other geographic locations (Doz and Hamel 1998). Examples of the latter reason in furniture manufacturing include gaining access to furniture designers, testing facilities, or materials that may not be available locally.

Strategic alliances can take many forms, and in the furniture industry, basic examples include alliances with suppliers and partnerships with furniture producers in other furniture categories. For example, a manufacturer of upholstered furniture and a producer of non-upholstered furniture may partner to design, produce, and market household living room products that are coordinated in style, color,

etc. This partnership creates complementary products, broadens consumer demand, and helps develop consumer “lock in” by marketing related furniture pieces (Bullard and West 2001; Shapiro and Varian 1999). Similar alliances are possible in markets for contract furniture, office furniture, and other broad furniture categories.

Today there is also an increasing awareness that supplier relations are just as important as customer relations (Brandenburger and Nalebuff 1998). Strategic alliances with suppliers go beyond transactional, short-term business to mutually profitable, long-lasting relationships. Given the information technologies of today, alliances between retailers and manufacturers, or between manufacturers and their suppliers of raw materials, can involve highly integrated processes and operations. Such alliances are a “building block” of lean manufacturing and lean retailing. Innovative business models effectively exploit the ability to share information – resulting in lower inventory costs, higher quality, less waste, and faster delivery times.

In the furniture industry, alliances between manufacturers and retailers and between manufacturers and suppliers can also help develop mutually beneficial strategy. Retailers, for example, can help identify specific trends in consumer demand – whether relating to style or to basic function. Partnerships between manufacturers and suppliers, meanwhile, can help ensure that factors such as environmental “friendliness,” labor conditions, and other issues are seriously considered when products and their components are made, packaged, and shipped. These factors can be used in marketing products to consumers who are increasingly sensitive to such issues.

Partnerships are also being used to integrate on-line shopping with furniture retailing. FurnitureFan.com and Best Brands Plus, for

example, have made plans for an “on-line alliance” (www.furninfo.com/news 2001). FurnitureFan is providing Best Brands Plus stores with a web presence designed to lead shoppers to a “bricks and mortar” store. Consumers benefit from the search engine and access to large amounts of information, but actual purchase is made through a neighborhood store.

Manufacturers can also partner directly with firms to enhance on-line information about their products, and to lead consumers to retailers where their products can be seen and purchased. For example, two of the nation’s largest upholstered furniture manufacturers – Flexsteel and La-Z-Boy – recently partnered with an internet application service provider, Intellitek, to provide software that will allow consumers to design furniture on-line, access new fabric patterns, and view accurate digital imagery of selections. Once a design is chosen, the software’s retail locator will find the nearest retailer for seeing the finished piece or obtaining more information (Thibodeaux 2001).

Partnerships, alliances, networks, and coalitions can take many forms. In the furniture industry the future will involve many more partnerships in developing business models that are successful in the long-term.

3. Build consumer loyalty aggressively

A third important factor in business concept innovation in the age of information is aggressively pursuing ways to build consumer loyalty – using information technologies in ways that will have consumers wanting to purchase specifically from *your* stores (for retailers), or more of *your* products (for manufacturers). New information technologies and networked computer systems allow manufacturing and retailing firms to develop relationships directly with customers in ways that were impossible

just a few years ago.

In marketing, a widely-cited example of the use of customer-specific information comes from selling a specific type of home furnishing – the nation’s number one vendor of clocks is American Express, a firm with a comprehensive database on the spending patterns of higher-income families (Evans and Wurster 1999). Another example of developing and using customer-direct relationships is the use of loyalty systems like the frequent flyer programs used by airlines, and the rebate-building credit cards sponsored by automobile companies, gasoline producers, and others. As information technology costs have dropped, opportunities to collect, store, and access customer-specific information on buying patterns have increased greatly.

Furniture retailers and manufacturers alike now have the ability to keep track of historical sales of different products by individual consumers, and this information can be used to target promotional efforts and to offer discounts and rebates that are cumulative for individual customers. As discussed by Bullard and West (2002), customer loyalty or “lock in” programs can take many forms. Trading stamps and coupons, for example, have been used for many years to build customer loyalty. Discounts to frequent and/or large scale buyers may include a low price for a minimum order size, discounts or extra merchandise for customers who order more than they did last year, and cumulative volume discounts.

With new information technologies, “smart cards” (Schwartz 1999), and the ability to track on-line purchases, producers can build consumer loyalty in many ways at low cost. A significant development is that this technology for building “loyal” customers is available to smaller and smaller firms in both retailing and manufacturing.

Summary

A popular adage states that people and organizations change for one of two reasons – when they “see the light,” or when they “feel the heat.” Significant changes have occurred in many industries recently, particularly as a result of new information technologies and networked computer systems. These advances have allowed manufacturing and retailing firms to improve internal business processes by helping coordinate demand, design, production, and distribution, and by helping to reduce administrative costs and improve customer service. Many such changes have been successfully implemented by firms in furniture manufacturing and retailing, as they have “seen the light” regarding important gains in efficiency. Increasingly, however, firms in the U.S. furniture industry have also “felt the heat” – from dramatically increased imports and from restructuring in the retail sector.

“Digital Darwinism” ensures that surviving firms in furniture manufacturing and furniture retailing will be those that adapt most successfully to the opportunities created by new information technologies. Although the future of specific firms is uncertain, it is apparent that success in the long run in this and other industries will involve efficiencies from replacing inventory with information, synergies from actively developing alliances and partnerships, and marketing advantages gained by aggressively pursuing strategies to build and use strong relationships with individual consumers.

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