

# **Productivity and Profit Issues in Durable Goods Distribution and Industrial Channels, and Channel Restructuring from the Convergence Effects of Service Unbundling, Foreign Manufacturing and Transaction Technology**

## **Portent for Distributors and Manufacturers**

**A White Paper by  
Scott Benfield of  
Benfield Consulting  
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### **Introduction**

Wholesale Distribution is a vast industry in the U.S. economy. The Durable Goods Sector of Wholesale Trade, representing goods with a life of 3 years or more, passes approximately \$2.35 trillion of merchandise through its doors.<sup>1</sup> Much of the Wholesale Trade is private, making financial performance numbers difficult to procure. Many industry associations issue annual financial performance reports (PAR), which are the important sources of information for discrete vertical markets of distribution. Benfield Consulting's work in the Durable Goods Wholesale Sector (NAICS 421) has questioned the productivity of the sector as a whole, especially those firms known as Merchant Wholesalers.<sup>2</sup> New data from the U.S. Census Bureau's Economic Census and PAR Reports show an economic sector that is not performing well compared to other sectors. The data portends changes in channel strategies, methods to market and channel relationships that will continue well into the future.

### **Economic Census and Data Comparisons**

The U.S. Census Bureau completes the Economic Census every five years. The latest Economic Census is for the period 1997 through 2002, with the completed data issued in the Summer and Fall of 2004. Current versions of the Economic Census use the NAICS industry classifications versus the SIC code classifications of years past. The comparative statistics for this paper use the 1997 NAICS Classifications, which were kept the same for the 2002 comparisons in the Wholesale Sector.<sup>2</sup> Future comparisons will use an expanded definition of the Wholesale sector developed in 2002 but are not a part of the comparative statistics.

The Economic Census allows comparisons between economic sectors to gauge the relative health of any one sector and also gives an economic history to understand the trends of the sector in question. The Economic Census Comparative Tables can be accessed at ([www.census.gov](http://www.census.gov)). The extracted data for selected sectors (see table below) was then analyzed to yield the following observations:<sup>3</sup>

- A five-year average of sales per employee places durable goods distribution's growth at .59% per year, which is in the bottom 10 percent of the nearly 100 listed two- and three-digit NAICS economic sectors.
- Other sectors with poor or negative sales growth were Transportation and Sightseeing sectors, which were impacted by 9/11/2001, or Primary Metals, which has largely moved to offshore facilities for manufacturing.
- Payroll per employee increased 2.75% per year during the period and is far in excess of the average sales growth of .59%. This places Durable Goods

distribution in the third quartile of payroll growth in the listed two- and three-digit NAICS economic sectors.

- When compared to sectors in which durable goods distributors serve or compete (Construction, Manufacturing, and Retail) sales per employee for distributors lag these sectors by a 3x to 6x factor.

Based on these analyses, the takeaways for Durable Goods Distribution show a minimal growth rate in productivity as measured by sales per employee, and this growth lags the majority of other economic sectors. The growth in payroll per employee stands at 2.75% per year, a rate four times faster than sales growth per employee.

### Key Statistics from 2002 Economic Census and Industry Group Comparisons

Industry	1997 Sales Emp. (000)	2002 Sales Emp. (000)	1997 Payroll Emp.(000)	2002 Payroll Emp.(000)	Avg. Sales Per Emp. Growth/ (Loss) Period	Avg. Payroll Per Emp. Growth/ (Loss) Period
<b>Manufact. Industries</b>	228.2	263.5	33.9	39.1	3.1%	3.05%
<b>Retailing</b>	175.9	210.9	16.9	20.4	4%	4.02%
<b>Wholesale Trade</b>	700.4	725.6	37.08	42.35	.72%	2.85%
<b>Wholesale Durable Goods</b>	641.4	660.3	39.21	44.6	.59%	2.75%
<b>Profess. And Tech. Services</b>	111.03	119.37	43.16	49.88	1.5%	3.11%
<b>Construction</b>	151.6	164.2	30.75	33.92	1.6%	2.06%

These findings are commensurate with past and present Benfield Consulting research, from private industry PAR reports, in the discrete industries of Electrical, Industrial and PHCP (Plumbing, Heating, Cooling and Piping) industries.<sup>4</sup> Overall during the period, the U.S. GDP grew at an average yearly rate of sales per employee of 3%, and an average yearly payroll per employee of 3%. In effect, the sales per employee and payroll per employee were even or balanced out. In most Durable Goods Wholesale sectors, however, there is a significant gap between sales per employee and payroll per employee.

Reviewing the table below, we selected seven merchant wholesaling industries from five- and four-digit NAICS codes. Of the seven industries, all but two (Chemicals and Allied Products, and Medical, Dental and Hospital Equipment and Supplies) the payroll per employee exceeded the sales per employee by a wide margin. Warm Air Heating was essentially even in both metrics and closely resembled the economy at large. Since wholesaler employee costs are, on average, 60 percent of operating expenses, the gap between sales and payroll per employee severely squeezes the profitability of the firm, and this is a contributing factor for some of the extremely low profits we have witnessed in many of these vertical markets in recent years. As a caveat, our research has found

that employee cost reductions in wholesaling often lag the downturns and, perhaps, this contributes to a portion of the gap in sales per employee versus payroll per employee.

We also note that the figures are nominal or specific to the year and the average inflation rate during the period was approximately 2.8%. Five of the seven listed industries did not keep up with the average inflation rate. The portent from the Economic Census derived data and PAR data is not good, however, and we devote the rest of this paper to trends in both distribution and durable goods channels. These trends converged to change the economic health of many Durable Goods Wholesale sectors. And the strategic direction and management of both distributors and manufacturers will change accordingly.

### Selected Merchant Wholesaler Statistics

<b>Industry Select 4 and 5 Digit NAICS</b>	<b>1997 Sales Emp. (000)</b>	<b>2000 Sales Emp. (000)</b>	<b>1997 Payroll Emp. (000)</b>	<b>2002 Payroll Emp. (000)</b>	<b>Avg. Sales Emp. Growth/(Loss) Period</b>	<b>Avg. Payroll Emp. Growth/(Loss) Period</b>
<b>Industrial</b>	301.3	319.8	36.1	40.4	1.23%	2.36%
<b>Electrical</b>	376.9	408.9	36.9	44.2	1.7%	3.95%
<b>Plumbing</b>	326.1	366.1	34.1	41.9	2.45%	4.61%
<b>Warm Air Heating</b>	333.7	392	36.7	42.9	3.49%	3.39%
<b>Computer Hardware and Software</b>	674.8	730.4	45.7	63.4	1.65%	7.77%
<b>Lumber and Construction Materials</b>	488.2	458	33.2	39.6	-1.24%	3.89%
<b>Chemical and Allied Products</b>	485.4	592.9	40.3	48.1	4.54%	3.98%
<b>Medical, Dental, Hospital Equipment and Supplies</b>	380.7	515.5	41.9	54.1	7.09%	5.83%

### **Convergence of Foreign Manufacturing, Service Unbundling and Transaction Technology**

Channels and the cost to distribute have traditionally been a competitive environment. Most Durable Goods Wholesale channels, however, are highly fragmented, with numerous manufacturer reps and agents and merchant wholesalers. The vast majority of merchant wholesalers are small businesses under \$10 million in sales, with the total industry count being 297,000 establishments. Consolidation of merchant channels has been a force for the better part of two decades but there remains a preponderance of small companies servicing industrial channels. Most industrial channels began growth somewhere in the Gilded Age as industrial manufacturing needed parts, close to market,

to service their end products. By the Victorian Era, industrial channels and supply houses were increasingly common and a Sears and Roebuck catalog of the age touted the company as “The World’s Largest Supply House.” The establishment of supply houses was, in the early years, a highly entrepreneurial venture, and many salesmen, from industrial manufacturers, found the need for supply and left the manufacturer ranks to start the supply house. As individual sectors grew and specialized trades emerged, sector-specific Wholesaler Distributors began to emerge as specialized products needed place, unbundling, repackaging, delivery and credit services.

Most Wholesale Distribution continued through the 1920s to the 1970s in a mode of product-driven expansion. It wasn’t until the 1980s that consolidation began to be common. Consolidation was driven by a number of factors, including the aging ownership of Wholesaler Distributors, overcapacity in geographic product sectors, and the rise of powerful chains in discrete sectors. During the late 1980s and early 1990s, however, several factors began to emerge that are changing the wholesaler distributor landscape. These changes involve the movement of domestic manufacturing to foreign shores, the maturation of product technologies, cost of service and low-cost transaction technology.

Domestic Manufacturing, over the course of the last 40 years or so, has slowly been moving overseas. The reasons for this include the need to penetrate foreign markets and the low-cost production available in foreign countries. This trend began in earnest and was historically marked by the fall of the Berlin Wall, the Tiananmen Square Incident, and NAFTA Accord. These events, in the late 1980s and early 1990s were a bellwether for the triumph of capitalism and industrialism over the shared state policy of communism. Accordingly, Eastern Europe, China and Mexico emerged as the dominant investment choices for U.S. manufacturers.<sup>5</sup> As factories moved overseas, their immediate effect was to reduce the sales of industrial distributors that served them, as is evident in Industrial and Electrical Wholesale sector profit performance. Beyond this, as manufacturing technology became widespread, foreign companies increasingly began to manufacture industrial products at lower costs. As their expertise and product quality improved, they began to market these products to U.S. Wholesaler Distributors through a variety of channels of reps, master distributors and domestic manufacturers. This was accelerated by the maturation and decreasing importance of domestic brands of industrial goods.

Many industrial goods are entering their 150<sup>th</sup> year of life. Drill bits, screwed fittings and abrasives came into wide use with the advent of powered machine tools of the mid 1800s. Armament manufacturers for the North in the Civil War used machine tools for intricate parts and rifling of muskets and cannons and were followed by the explosion of modern plumbing, electrical, and building materials during the next 50 years. While many of these products have changed, the basic product designs are still in use today and are accepted industry standards. As the product life passes the century mark, the operative word for manufacturers is to get the cost out. Consequently, brand distinction in many industrial products is falling, as most end-users don’t care about the brand of a standard shop brush, drill bit, screwed fitting, toilet bolt or electrical cable. End-users do want acceptable product quality and are increasingly interested in service options that surround them, and the domain of services is a future playground of profit for distributors and manufacturers.

Services surrounding the industrial products are typically bundled in the price of the product. As products have commoditized, the cost to serve and unique services have become more valuable. Also, service costs, when bundled, were obscured by the product

price and their individual value and cost to provide were largely under radar.<sup>6</sup> With the increasing focus on channel cost and productivity, basic services will require unbundling and new services will need to be created to cover the loss of profit from maturing, commodity products. Not all customers want all services, and sales assistance is becoming discretionary and is being challenged by lower costs of solicitation including e-commerce and catalogs.<sup>7</sup>

E-Commerce was frowned upon in 2001 as the dot-com crash became evident. Most wholesaler executives looked at the predictions of the early pioneers as so much bluster. In 2005, however, increasing amounts of customers are ordering industrial goods online, and this trend will increase. The long-run cost of maintaining an e-commerce presence, from our consulting, is somewhere between .1% to .3% of sales. This compares to an inside and outside sales presence cost of 7% to 9% of sales. Most distributors are using e-commerce to augment their outside sales efforts. However, cost pressure will likely dictate that wholesalers will be forced to offer differing and, in some instances, unbundled prices for solicitation efforts. In essence, there will be a lower price if you buy online and a higher price for sales assistance. These options require technology to track solicitations by transaction and bill accordingly and the technology is being deployed today by forward thinking wholesalers. As e-commerce is more readily accepted and cost pressure continues, we will likely see new, low-cost models of distribution called Transactional Distributors who compete for economic buyers with the lowest cost transaction.<sup>8</sup>

The convergence of solicitation technology, foreign manufacturing, maturation of products, service costs and low productivity will have a substantial change effect on the existing industrial channels. These effects will blanket North American channels and, if our hunch is correct, affect Western Europe also. In essence, anywhere there are mature channels of distribution, subject to the convergence factors, the following trends are likely to occur.

### **Likely Outcomes and Observances for the Durable Goods Sector of Wholesaling**

Sales-per-employee is only one way to measure productivity. Other methods, including Total Factor Productivity, are worthy of review. In general, however, rising productivity, as exhibited by sales per employee, is necessary for continued profitability, competitiveness and investment. Based on the low productivity in Durable Goods Sector and convergence issue, our belief is that the following trends will be prominent in the sector. Many of these trends are in full bloom, while others are beginning but will become more prevalent.

- Profits as measured as a percent of sales or assets (EBIT, NPBT, ROS, ROA) will remain at historic lows in many sectors. For example, the Industrial Goods sector of distribution is saddled with record low profits for the past five years, with net-profit-before-tax not making it above 1%. The Industrial Sector of Merchant Wholesalers lost approximately 22% of their establishments during the five-year period, while overall establishments were down approximately 1%. The Electrical Sector has been mired in historically low profits of less than 2% net-profit-before-tax for the better part of a decade.
- Return on Capital, Return on Equity, and Return on Net Worth will remain low in the sector, and this will cause many private owners to sell or make cost cuts to improve profits. A recent study by the NAED (National Association of Electrical

Distributors/TED Magazine 4 Decades of Distribution) showed Return on Net Worth being cut in half from 20% in the late 1970s to around 10% by 2004. Our review of large, public electrical and electronics distributors finds that less than 70 percent have recent returns that are greater than the average of the public markets of 11.7%. Many have returns on capital in the 6% to 8% range. It is questionable whether many firms in these sectors cover their cost of capital.

- Wage increases will likely exceed sales growth, as distribution will need better, more educated managers and employees to change the productivity slide. Estimates on educational attainment for merchant distribution have been low compared with other sectors. Employees with better educations will cost more in the short run but should help improve the picture in the long run by increasing the productivity rate with better process knowledge.
- The areas of customer service, inside sales and outside sales, will be under increased pressure to perform, or their ranks will be thinned. Employee costs are 60% of distributor operating expenses and the sales functions represent 50% to 60% of all employee costs.
- Cost of service, located in the operating expenses of the firm, will become a strategic focus, and those companies that reduce or leverage costs will win the battle against top-line focused competitors. Those companies with operating costs significantly below their competitors will take the cost advantage to the street and push marginal profit companies (there are many) toward insolvency.
- Leveraging costs with new models of distribution, new methods of solicitation, or through a focus on the most activity profitable segments and customers will become more common.
- Vendor consolidation and streamlining the back door supply chain will continue in importance to drive RONA (Return on Net Assets), and wholesalers will increasingly look to master distributors with global connections to source C and D items. Small wholesalers, which numerically dominate most sectors, will have an increasing dependence on master distributors, as their cash position and loan covenants, as affected by poor profits, will not allow them to buy in bulk quantities, at lower margins, from major vendors.
- Consolidation in the industry will continue, but consolidation will need to consider the front door focus of the acquisition candidate and those without a good strategic fit (front door focus) will be passed over. Consolidation has been prevalent in the recent past but is of questionable value in helping productivity.<sup>9</sup>
- Increasing investment in software to provide information and leverage costs will continue. Software and knowledge brokers of productivity and cost management will be in greater demand.
- The use of alternative solicitation methods at a lower cost per sale will increase, and telesales, catalogs, and e-commerce will accelerate.

The pace of these changes, in exact numbers, is unknown. However, the stage is set for dramatic change in the cost platform of durable goods distributors and the use of lower-cost solicitation and greater technology and knowledge to manage costs. The dependency on top-line sales to correct this situation, will, in most instances, not be a viable option.

### **Manufacturer Channel Issues**

Channel management for industrial manufacturers has largely been taught around assigning the appropriate channel to secure the desired end-user segment. The distributor is seen as a conduit to market, and alignment of distributors with desired end-user segment is the historic challenge. Substantially less literature and instruction exists on what to do with an existing channel that is undergoing the stresses of poor earnings, low productivity, and severe cost pressure. Many times, academics argue that new channels will emerge that give the manufacturer needed options in distribution. At this juncture, however, there are no dominating alternative channels, with substantially healthier finances, to provide manufacturers access to existing markets.

In building supplies and construction markets, Home Depot and Lowes participate in contractor sales, but most research finds these firms serve the smaller contractors with limited product needs and low individual buying clout. Industrial and scientific markets have the presence of catalog wholesalers whose earnings pictures typically are better than that of sales-intensive distributors, and a recent article on the automotive aftermarket channels (“The Evolution of Distribution,” *Aftermarket Business*, Dec. 2004) warns of share loss of industry “WD’s” to retailers. For the most part, however, non-traditional and less sales-intensive channel firms, while individually large, collectively count for only a small portion of their sectors’ sales.

Based on the poor productivity and profit picture of many wholesale sectors, Benfield Consulting believes the following trends will be a challenge to manufacturers as distributors attempt to squeeze more profits out of the supply chain:

- Distributors, where it makes sense, will source directly from unknown or lesser know manufacturers in China, Mexico, The Pacific Rim and Eastern Europe. They will bypass mature brands with high production costs in lieu of knock-off brands with passable quality. Some distributors may take an equity position in a foreign manufacturer and others will import containers of foreign goods and market them under their proprietary brand name.
- Master distributors, with global sourcing capabilities, will become more powerful and will expand their product offerings to A and B items. They will, because of their product cost advantage and small order sizes, compete with leading domestic brands across many product line offerings. Recent research by Benfield Consulting has found that distributors are increasing their purchases from Master Distributors by three percent to five percent per year and they expect this to continue into the future.<sup>10</sup>
- Manufacturers will find that demonstrable channel cost savings have increasing clout over wholesaler relationships. In some instances, channel cost savings will supplant brand recognition and quality as the staying power in the relationship.
- Sales promotion will likely decrease in importance as product cost becomes a primary concern to the end user. A survey of sales promotion activities in the Electrical Sector found that end-user customers, in four of five segments, deemed sales promotion less important and of less satisfaction than other variables, including inside sales knowledge and warranty policy.<sup>11</sup>
- Wholesaler performance metrics have moved from how much a firm buys to how much they sell and what segment(s) they sell to. This is being eclipsed by low-

cost service providers to the segment of interest, including which wholesale firms have the lowest front door operating costs. Identifying and developing relationships with low-cost service providers is of primary importance to the manufacturer's future but identifying these wholesale firms is difficult.

- Wholesalers will carry more competing brands and develop Web commerce sites under different dba's and/or private brands to sell low-cost imports. This will be especially prominent in territories where the high -cost (read domestic) manufacturer has created a cost umbrella to support the maturing brand. The time-to-market for these efforts can happen in several months, as e-commerce software, product content, distributor programming and foreign sources are readily available and the costs for technology are falling. A recent survey found that online ordering is expected to grow threefold, from 8% to 26% by 2008.<sup>12</sup>

In many markets, manufacturers may find that owning the capital-intensive plant, property and equipment is not of a strategic advantage. Controlling the channel relationships with low-cost supply chains, investing in the latest product research and development, and licensing the best-fit foreign manufacturer are a better model than doing everything in house and under one roof. Where it makes sense, manufacturers may find that relationships with master distributors or "one off" collaborations with key distributors to source low-cost goods are the best means to hold onto channel positions.

### **Caveats and Unknowns**

The cited changes in this paper are not specific to all durable goods sectors. Some sectors will exhibit many of these issues, while others will be subjected to only a few. Migrations in labor from manufacturing to other economic sectors cause an unknown effect on sales per employee specific to each sector. But, the overall lagging of wholesaler distributors in sales per employee versus other sectors is worrisome. In general, the major trends of low productivity, sliding middleman profits, end-user demands for cost reduction, maturation of product technologies, new solicitation technologies and increasing acceptance of foreign goods will have a convergence effect that will cause major changes. Management change is eminent in the areas of sales deployment, service resource allocation, strategic marketing, channel management and holding onto established channel relationships. Much of the outside seller dominance of industrial channels will take a back seat to cost reduction of channel transactions and service redeployment and new service development. Manufacturers and wholesaler distributors are advised to review their industry specific trends and scenario plan for the probable outcomes.

*Scott Benfield is a consultant for industrial manufacturers and distributors. He is the author of four books, numerous research studies, and articles on channel issues. His firm, Benfield Consulting, is located in a suburb of Chicago. His Web site is [www.benfieldconsulting.com](http://www.benfieldconsulting.com). He can be reached at (630)-428-9311 or at [bnldgp@aol.com](mailto:bnldgp@aol.com).*

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<sup>1</sup> Total Sales for Durable Goods Wholesale Trade NAICS 421 in 2002. See the following Web address:  
<http://www.census.gov/econ/census02/advance/TABLE2.HTM>

<sup>2</sup> Comparisons for NAICS classifications in the Wholesale Sector between 1997 and 2002 with starting and ending classifications being the same were confirmed with Bobby Nusz, The Bureau of Economic Census, on October 13<sup>th</sup>, 2004,

<sup>3</sup> Full detail on all sectors available by e-mail request from [www.benfieldconsulting.com](http://www.benfieldconsulting.com).

<sup>4</sup> Benfield Consulting has reviewed sales per employee from vertical sector (PAR) reports for various periods of 5, 10, and 20 years during the 1980s, 1990s and 2000. All of the reviews have found that real sales per employee have not increased to any substantial degree. See our article at Progressive Distributor for the initial research :

<http://www.mrotoday.com/progressive/online%20exclusives/questforproductivity.htm>

<sup>5</sup> See, The China Syndrome, a research project on the movement of domestic manufacturing to foreign shores and the effects on wholesale distribution by Scott Benfield and Richard Vurva, 2003. Progressive Distributor Publisher, [www.progressivedistributor.com](http://www.progressivedistributor.com).

<sup>6</sup> For suggested reading on services, see the work of Adam Fein and Mark Dancer at [www.pembrokeconsulting.com](http://www.pembrokeconsulting.com), or see our book, Services That Sell, 2004 reprint, at [www.nawpubs.org](http://www.nawpubs.org).

<sup>7</sup> For a read on the cost of solicitation of outside sales commensurate with their value, see

<http://www.mrotoday.com/progressive/online%20exclusives/outsidealeseffort.htm>

<sup>8</sup> See our article on Transactional Distribution at

<http://www.mrotoday.com/progressive/online%20exclusives/transactionaldistributor.htm>

<sup>9</sup> Any number of studies of consolidation, mergers and acquisitions have found that post-acquisition stock prices have a 70% or so chance of being lower than pre-merger prices. Simply use the verbiage “post acquisition stock price research” in your favorite search engine for any number of studies on this subject.

<sup>10</sup> Benfield Consulting research, Canadian Institute of Plumbing and Heating, 2004.

<sup>11</sup> NAED Research, Valuation and Reformation of Service Offerings, National Electrical Research and Education Foundation 2004/05 research project, Benfield Consulting.

<sup>12</sup> Five Technology Trends for Industrial Distributors, Adam Fein, Pembroke Consulting, Progressive Distributor, November 2004.