

Hot Topic Report

Supply Chain Metrics

Data for You to Compare Against

Supply Chain Consortium
Benchmarking & Best Practices

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www.supplychainconsortium.com

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SUPPLY CHAIN
C O N S O R T I U M

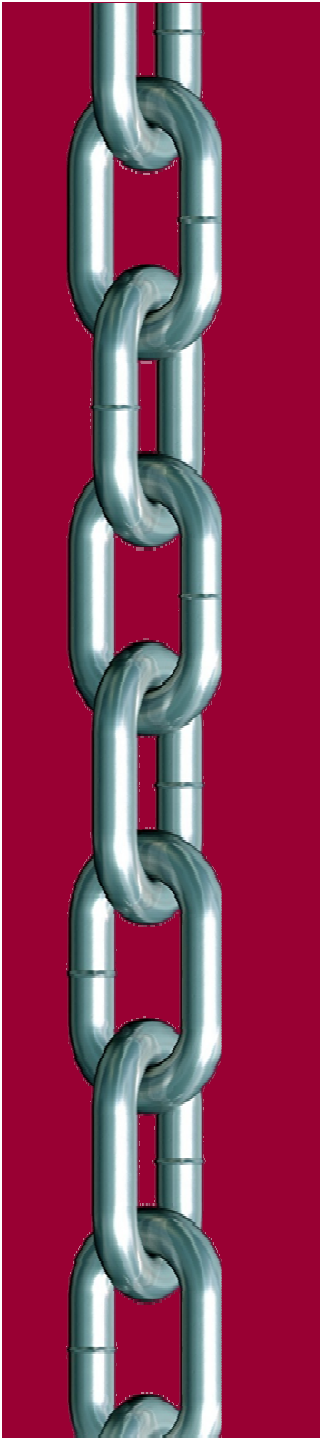


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Introduction

The *Supply Chain Metrics Report* provides responses from a wide range of industries about common supply chain metrics. More than 100 companies participated in the survey, allowing the data to be segmented by industry in many of the questions.

Topics from the survey include:

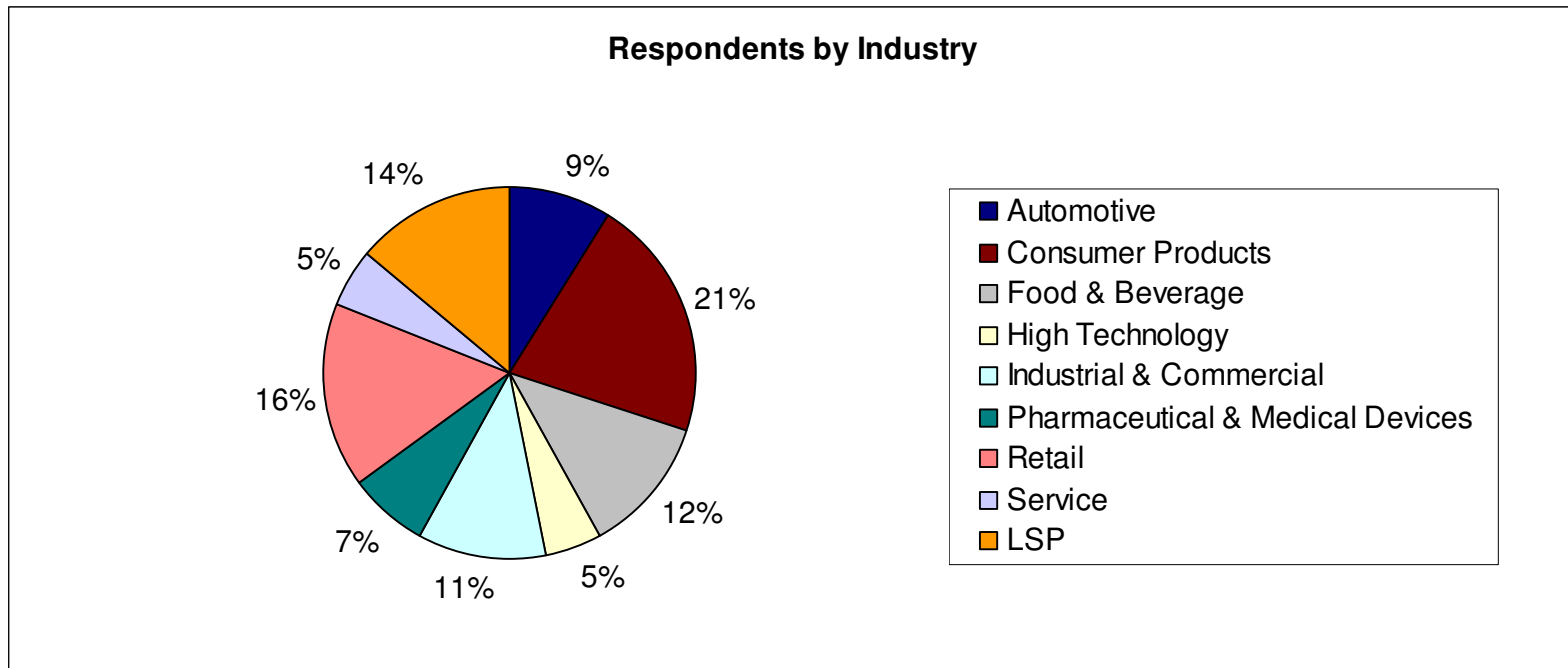
- Annual logistics costs
- Distribution centers (DCs)
- Finished goods inventory turns
- DC throughput
- DC level of automation
- Supply chain function headcounts & spends
- Transportation shipments & fuel costs
- Transportation providers
- On-time delivery
- Freight audit processes
- Transportation sourcing solutions.

Industries from the survey include:

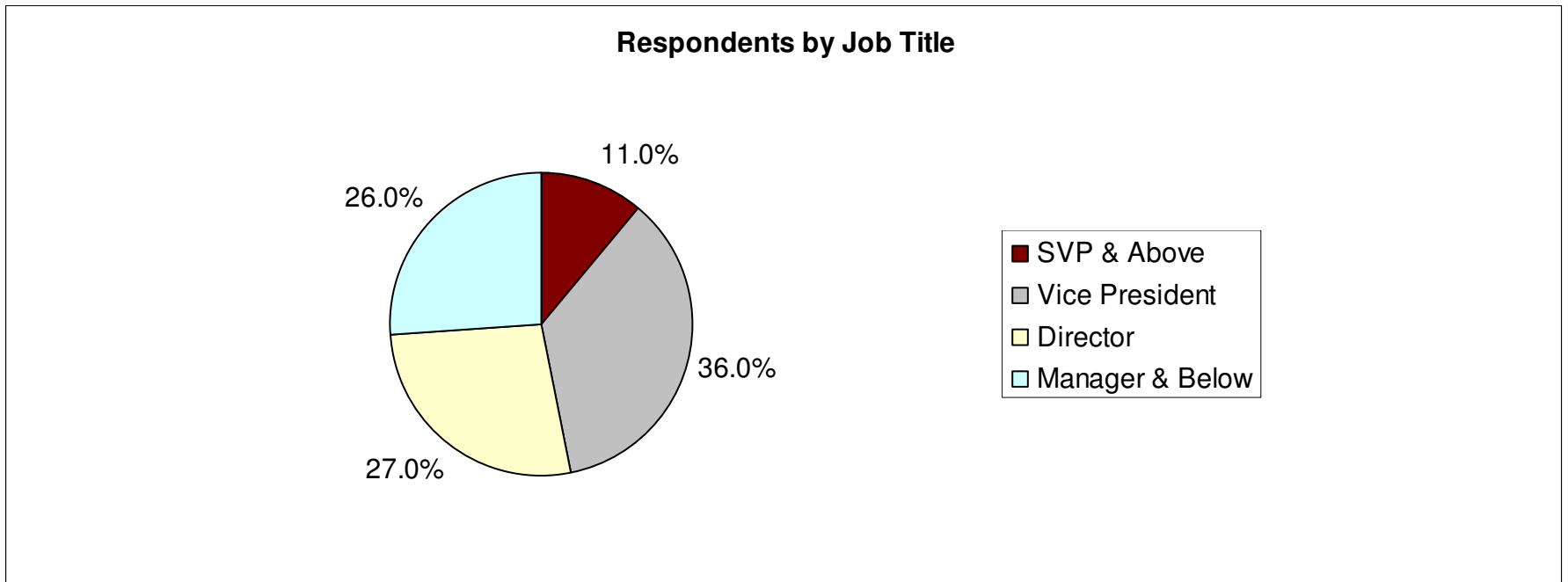
- Automotive
- Consumer products
- Food & beverage
- High technology
- Industrial & commercial
- Pharmaceutical & medical devices
- Retail
- Service
- Logistics Service Providers (LSP)

Data is presented throughout the report so that readers may draw their own comparisons. The Tompkins Supply Chain Consortium also thanks everyone who took the time to complete the survey.

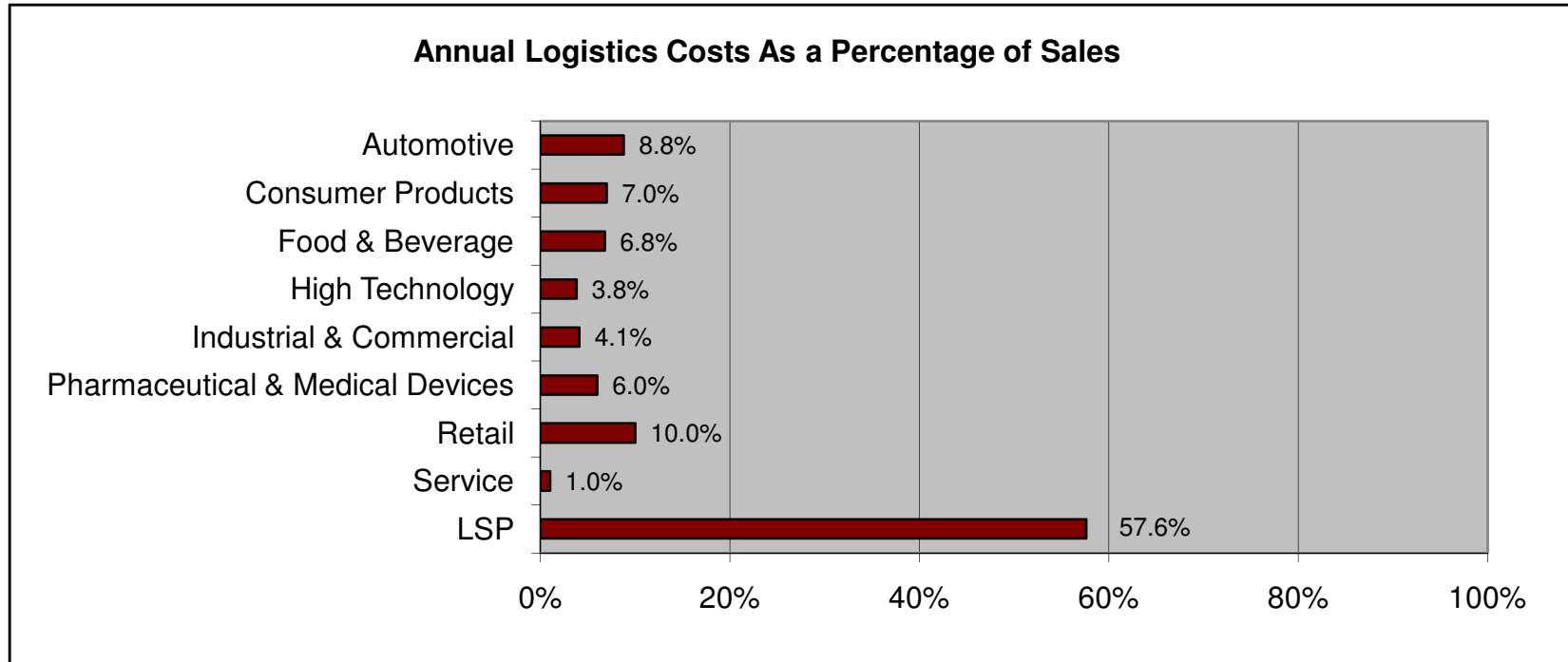
Survey Demographics



Survey Demographics



Logistics Metrics



- The annual logistics cost as a percentage of sales varies industry to industry and company to company.
- It includes outbound transportation, distribution operations, customer service, and administrative and allocated cost, as well as other costs associated with the supply chain.

Distribution Center Metrics

Total Number of DCs			
Industry	Low	Average	High
Automotive	3	13.0	42
Consumer Products	1	16.5	>160
Food & Beverage	2	19.5	86
High Technology	10	71.7	105
Industrial & Commercial	1	17.3	84
Pharmaceutical & Medical Devices	1	29.0	>100
Retail	1	9.3	20
Service	0	1.8	5
LSP	0	25.0	200

- The total number of DCs changes depending on industry and company, but averages 22 across all respondents.
- Industries with the highest average number of DCs include high technology and pharmaceutical & medical devices.

Distribution Center Metrics

Percentage of Company-Owned DCs			
Industry	Low	Average	High
Automotive	0	60.8	95
Consumer Products	14	65.2	100
Food & Beverage	0	75.4	100
High Technology	5	38.0	99
Industrial & Commercial	0	63.6	100
Pharmaceutical & Medical Devices	40	85.0	100
Retail	0	74.9	100
Service	33	77.7	100
LSP	0	71.9	100

- The percentage of company-owned DCs averages more than 68% across all industries, with pharmaceuticals & medical devices leading the way.

Distribution Center Metrics

Percentage of Company-Owned DCs Staffed By Company Employees			
Industry	Low	Average	High
Automotive	0	51.3	100
Consumer Products	14	77.4	100
Food & Beverage	0	55.4	100
High Technology	5	55.0	100
Industrial & Commercial	0	85.0	100
Pharmaceutical & Medical Devices	10	77.5	100
Retail	0	77.9	100
Service	100	100.0	100
LSP	0	84.4	100

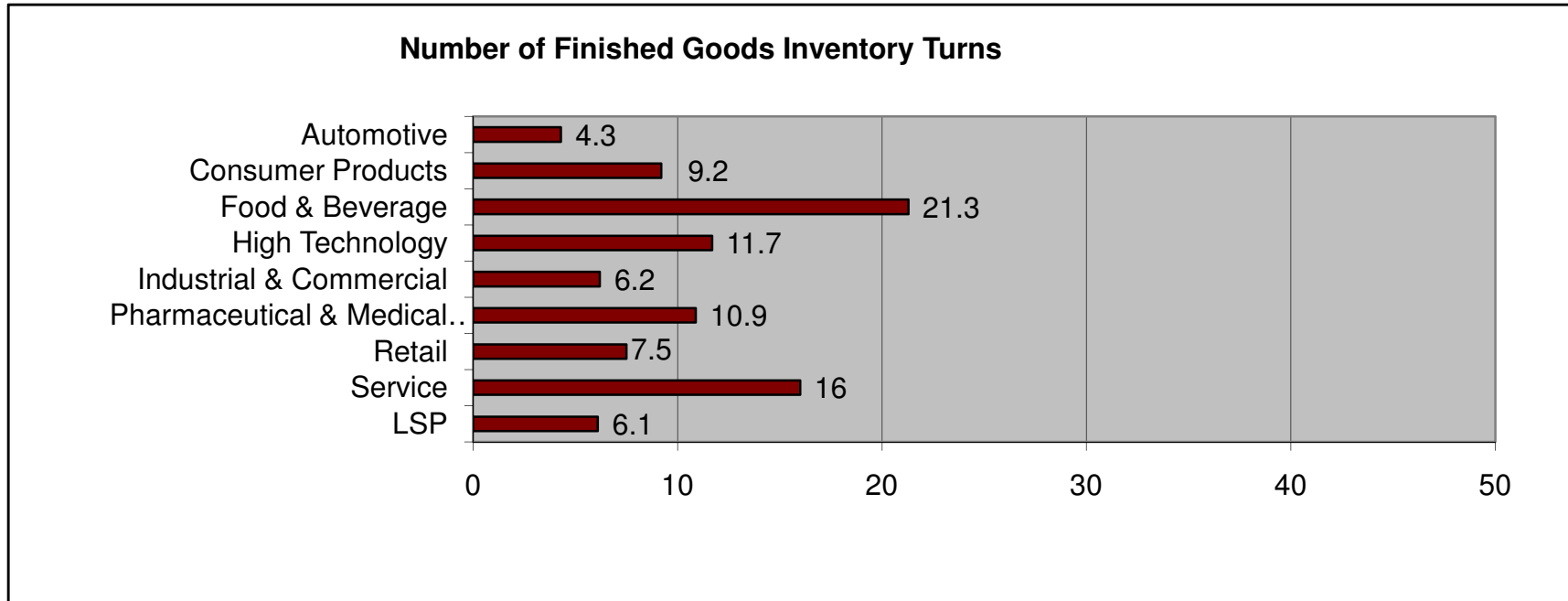
- Among all industries, nearly 74% of companies have their own DCs staffed by their own employees.

Distribution Center Metrics

Percentage of Fully Outsourced DCs (Building & Labor)			
Industry	Low	Average	High
Automotive	5	38.9	100
Consumer Products	0	32.8	86
Food & Beverage	0	24.6	100
High Technology	1	62.0	95
Industrial & Commercial	0	36.5	100
Pharmaceutical & Medical Devices	0	14.0	60
Retail	0	21.2	100
Service	0	22.3	67
LSP	0	28.1	100

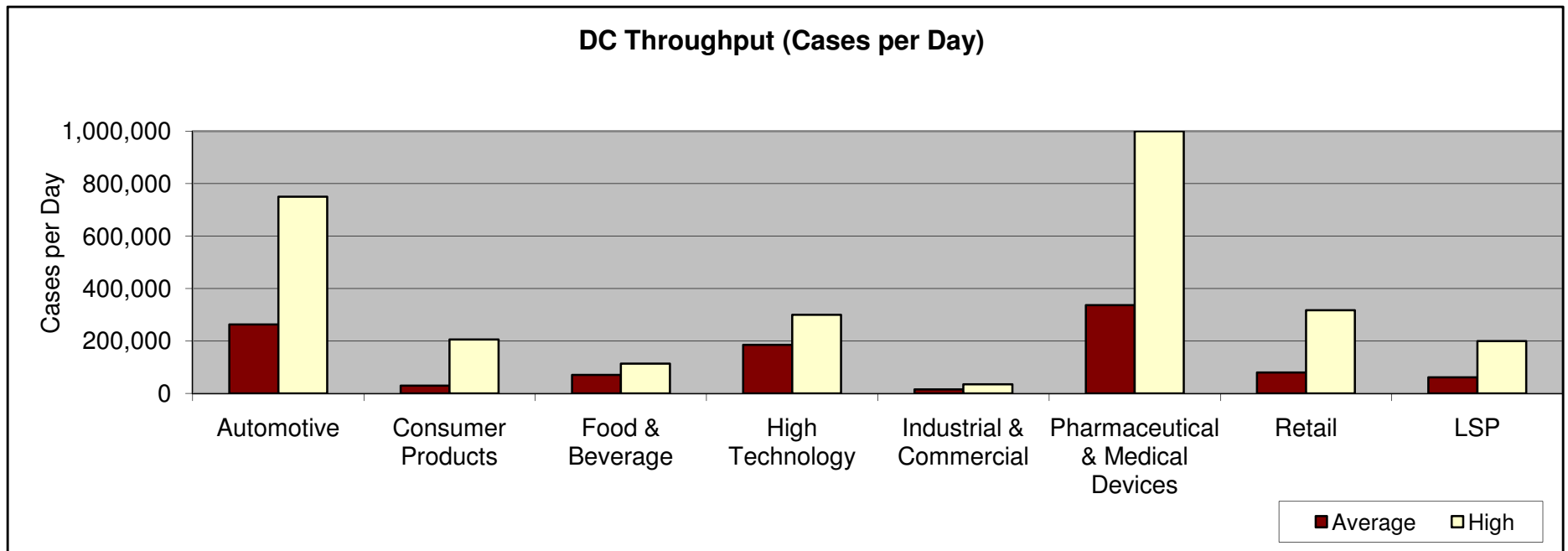
- Thirty-two percent of distribution centers are fully outsourced across all industries.

Finished Goods Inventory Turns



- Finished goods inventory turns range from over 4 to more than 21 by industry.
- The average is 10 turns across all industries.

DC Throughput



- DC throughput changes from industry to industry and company to company.
- The average throughput per DC ranges from 2,000 to more than 20,000 cases per day.

DC Automation

Percentage of Respondents with a Low, Moderate or High DC Automation Level			
Industry	Low	Moderate	High
Automotive	40%	40%	20%
Consumer Products	27%	33%	40%
Food & Beverage	67%	0%	33%
High Technology	33%	0%	67%
Industrial & Commercial	33%	50%	17%
Pharmaceutical & Medical Devices	0%	33%	67%
Retail	0%	30%	70%
LSP	17%	50%	33%

- Retail companies have higher levels of automation in their DCs, including greater use of conveyors, sortation systems, and automated storage and retrieval systems.

Total Supply Chain Headcount

Total Supply Chain Headcount Percentages						
Industry	Transportation	Distribution	Customer Service	Administration	Supply Chain Planning	Other
Automotive	4%	59%	26%	0.7%	7%	3%
Consumer Products	6%	55%	23%	5%	9%	2%
Food & Beverage	14%	61%	14%	2%	3%	6%
High Technology	2%	84%	8%	6%	0.6%	0%
Industrial & Commercial	3%	49%	36%	3%	7%	3%
Pharmaceutical & Medical Devices	13%	46%	25%	3%	8%	5%
Retail	21%	54%	9%	8%	3%	5%
Service	11%	46%	25%	10%	4%	4%
LSP	23%	55%	6%	9%	7%	0.4%

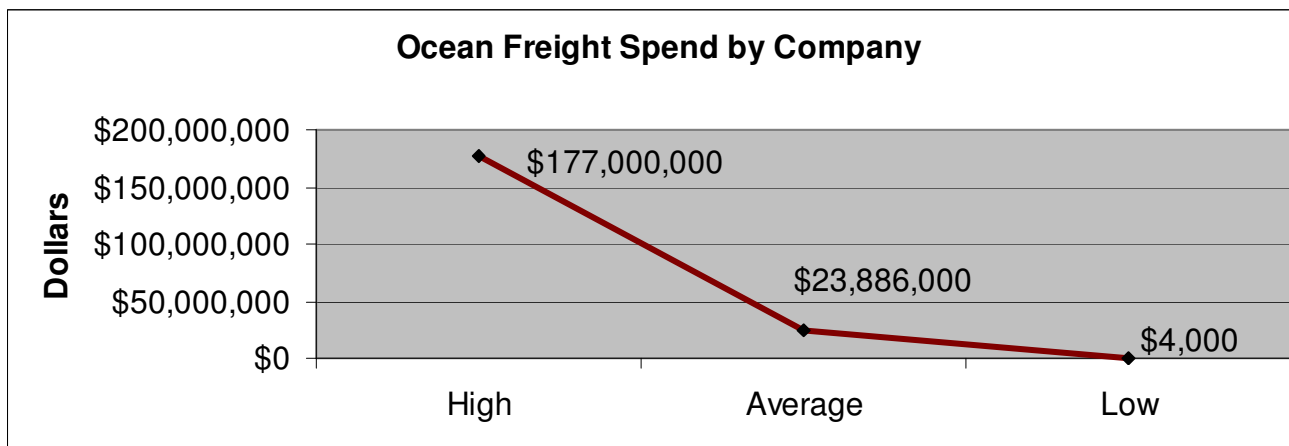
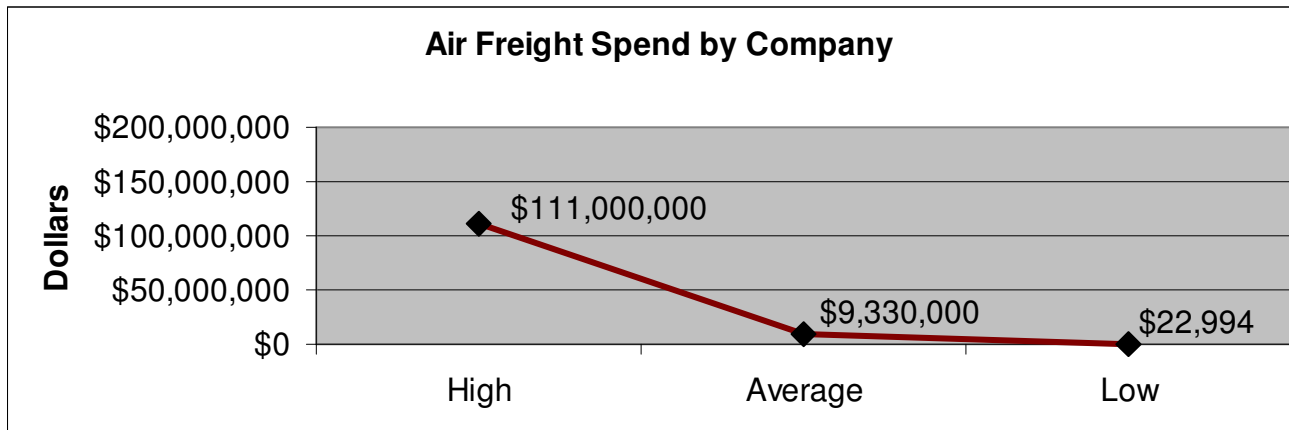
- Each industry and company have varying headcount percentages in different areas of the supply chain.
- Most companies have more than 50% of their total logistics resources in customer service, distribution and transportation.

Transportation Metrics

Statistics	IB Cost as a Percentage of Costs of Goods	IB Cost as a Percentage of Net Sales
Low	0.03%	0.01%
Average	4.7%	2.4%
High	25%	17%

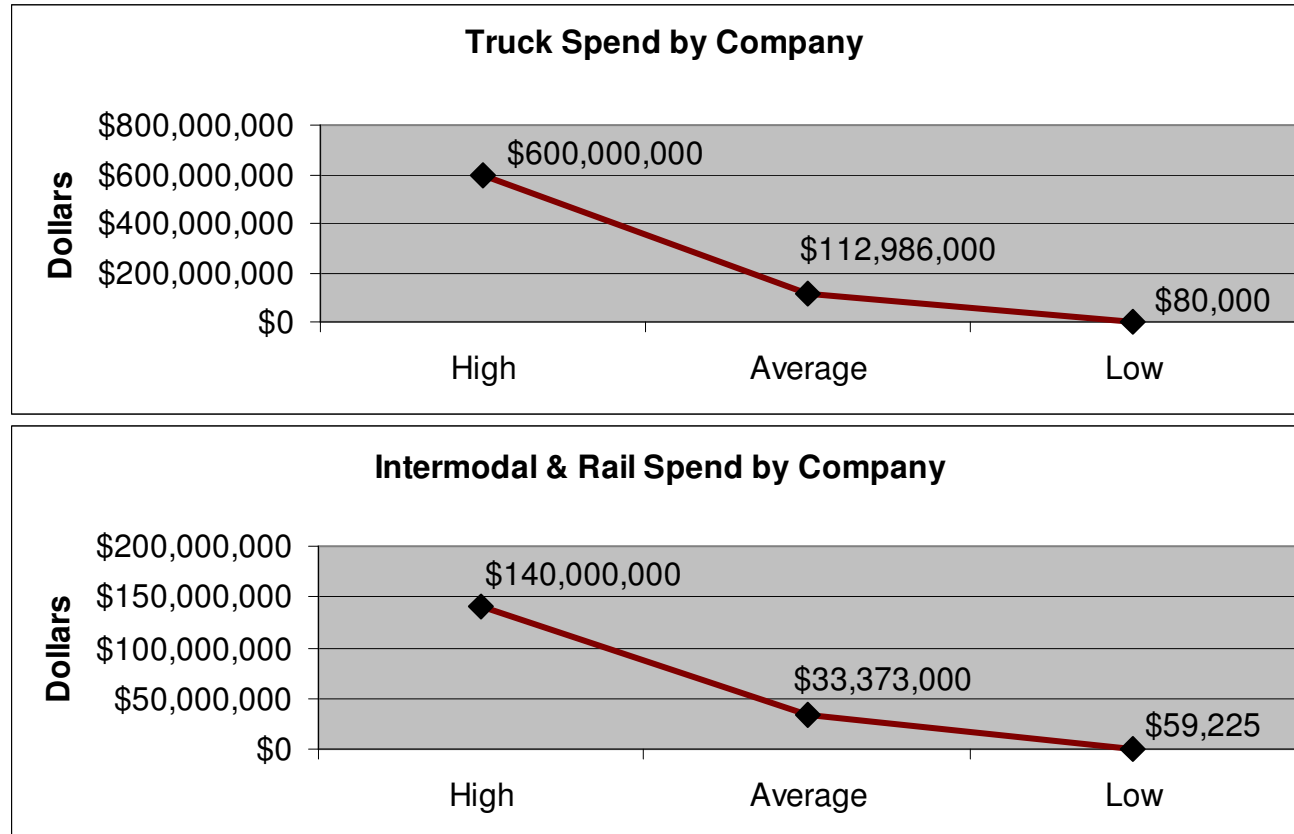
- Inbound transportation (IB) cost is compared as a percentage of cost of goods sold (COGS), as well as a percentage of net sales.
- Since there were not enough responses to segment by industry, this data crosses all industries and types of companies.

Transportation Metrics



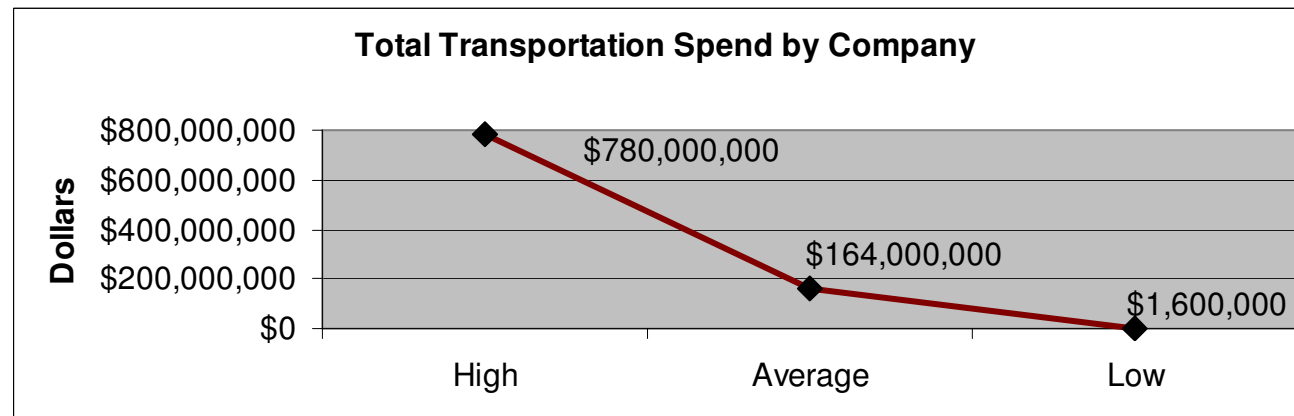
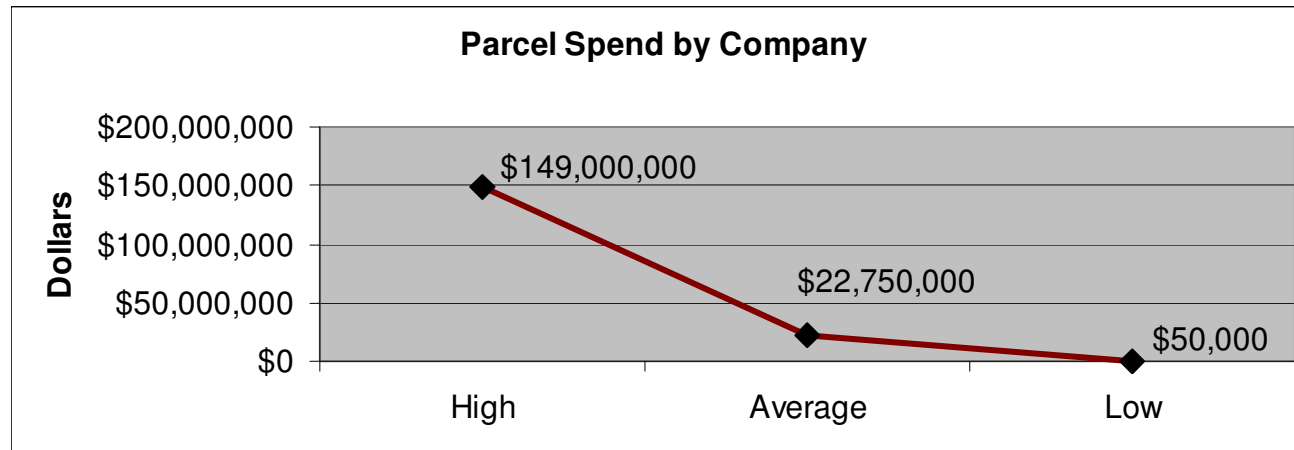
- Air freight spend by company ranges from a high of \$111M to a low of \$23K and averages \$9.3M.
- Ocean freight spend by company ranges from a high of \$177M to a low of \$4K and averages nearly \$24M.

Transportation Metrics



- Truck spend by company ranges from a high of \$600M to a low of \$80K and averages \$113M.
- Intermodal and rail freight spend by company ranges from a high of \$140M to a low of \$59K and averages over \$33.4M.

Transportation Metrics



- Parcel freight spend by company ranges from a high of \$149M to a low of \$50K and averages \$22.8M.
- Total freight spend by company ranges from a high of \$780M to a low of \$1.6M and averages \$164M.

Transportation Metrics

Total Number of Shipments by Company per Year						
Statistics	Air freight	Ocean	Road	Intermodal / Rail	Parcel	Total
Low	<10	<10	<10	<20	120	300
Average	120,128	7,562	163,560	20,027	1,988,923	1,331,813
High	1,000,000	37,000	1,000,000	75,000	14,900,000	15,000,000

- The total number of shipments represents a broad spectrum of information from large companies with millions of shipments a year to those with a few hundred or less shipments a year, depending on the transportation mode.
- Transportation volume greatly favors road and ocean shipments, which represent a large numbers of packages and parcel shipments (individual packages).

Transportation Metrics

Statistics	Fuel Cost as a Percentage of Total Transportation Spend
Low	1%
Average	19%
High	45%

- Respondents rate fuel cost as a percentage of total transportation spend between 1-45%.
- Food and beverage companies, along with LSPs industries have the highest fuel cost as a percentage of transportation.

Transportation Metrics

Statistics	Number of Transportation Providers per Company
Low	1
Average	82
High	450

- The number of transportation providers ranges from a low of 1 to a high of 450, with an average of 82.
- The industries with the greatest number of transportation carriers are industrial & commercial, followed by logistics service providers.

Transportation Metrics

Statistics	Percentage of Transportation Service Providers that Represent 80% of the Company's Transportation Spend
Low	1%
Average	26%
High	100%

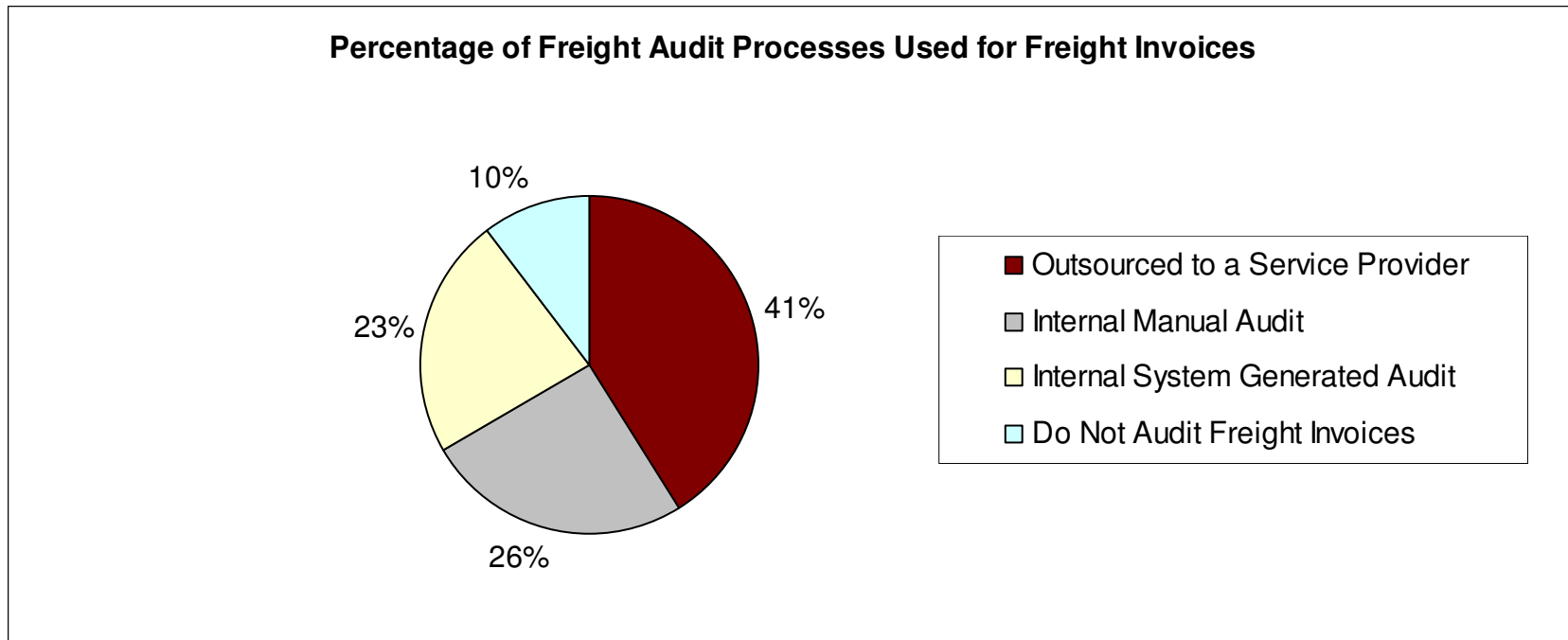
- The percentage of transportation service providers that represent 80% of the company's transportation spend ranges from 1-100%, with an average of 26%.
- The industries with the greatest number of transportation service providers that represent 80% of the company's transportation spend are pharmaceuticals & medical devices, followed by food & beverage.

Transportation Metrics

Percentage of On-Time Delivery by Mode					
Statistics	Air Freight	Ocean	Road	Intermodal & Rail	Parcel
Low	85%	25%	65%	65%	86%
Average	97%	79%	93%	86%	97%
High	100%	96%	100%	95%	100%

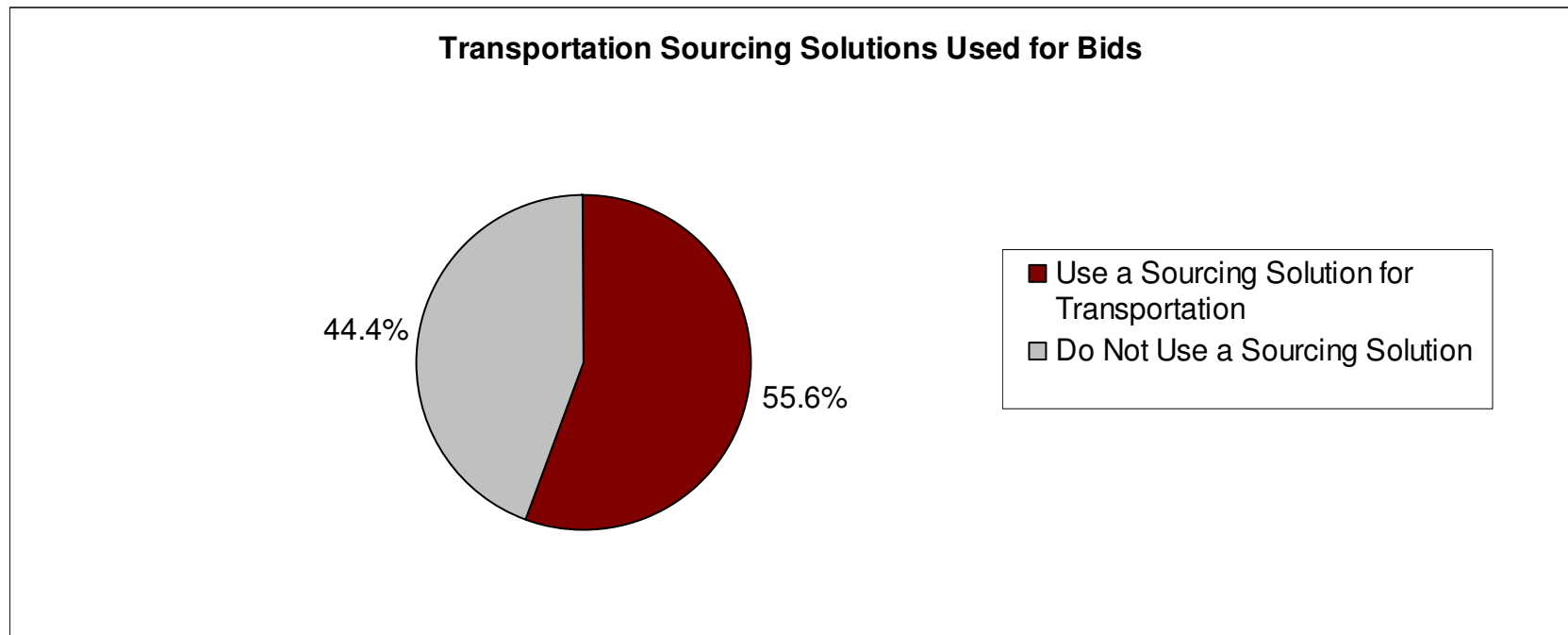
- On-time delivery varies greatly by mode.
- Ocean is the most variable with a low of 25% and a high of 96%.
- The most used mode (road) averages an on-time delivery of 93%.

Transportation Metrics



- Forty-one percent of freight audit processes are outsourced to a service provider.
- Nearly 50% of respondents use some form of internal audit process, while 10% do not audit at all.

Transportation Metrics



- About 56% of respondents use a transportation sourcing solution.

Supply Chain Functions

Annual Supply Chain Costs as a Percentage of Net Sales					
Statistics	Outbound Transportation	Distribution Operations	Customer Service	Administration & Allocation	Other
Low	0.30%	0.60%	0.10%	0%	0.10%
Average	3%	3%	0.40%	1%	1%
High	6%	7%	1%	3%	4%

- The chart above shows components of the annual supply chain cost as a percentage of sales.
- Across all functions, the average total cost as a percentage of net sales is 7.6%.

Supply Chain Functions

Annual Supply Chain Costs as a Percentage of Total Logistics Costs					
Statistics	Outbound Transportation	Distribution Operations	Customer Service	Administration & Allocation	Other
Low	2%	20%	0.40%	0.80%	2%
Average	42%	43%	10%	8%	10%
High	94%	75%	50%	24%	40%

- Responses indicate a wide variance in the ranges for the supply chain costs as a percentage of total logistics costs within functions.
- On average, outbound transportation and distribution operations represent approximately the same percentage of the total logistics cost at 42.4% and 42.5%.

Summary

Key points from the survey include:

- Company-owned DCs average 68% across all industries versus, outsourced DCs at 32%.
- At 21.3, the food & beverage industry has the highest number of finished goods inventory turns.
- Inbound transportation metrics average 4.7% as a percentage of COGS sold and 2.4% as a percentage of net sales.
- The industrial & commercial industry has the highest number of transportation service providers.
- On-time delivery by mode ranges from 79% for ocean to 97% for parcel and air freight.
- Total annual logistics cost as a percentage of net sales ranges from 4.1% to 10.0%.
- Most companies have more than 50% of their total logistics resources in distribution, customer service and transportation.

Report Authors

To learn more about supply chain metrics as well as benchmarking and best practices, additional resources are available to members through the Supply Chain Consortium: www.supplychainconsortium.com

Qualified companies may join the Supply Chain Consortium's LinkedIn or Xing Group: www.supplychainconsortium.com/rc/connections.asp

Transforming Supply Chains for Value Creation

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