



Employment Numbers: How do you figure that?

NASPPR-VEWAA Pre-Conference
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Objectives

- **Common Public Sources of Occupational and Labor Market Data**
- **Current Methods to Estimate Employment**
- **SkillTRAN Industry Context Method**
- **Unskilled Sedentary Occupations**
- **Unskilled Sedentary Industries**

Supporting Materials

- Slide Notes
- Pocket Guide to the DOT
- Technical Discussion of Industry Context Methodology
- Sedentary Unskilled DOT Occupations by DOT Industry and by Frequency

Challenges Facing the US Economy

Growth vs. Recession

- Business Decisions [Housing / Credit Crunch]
- Imbalance of Imports vs. Exports [Weak dollar]
- Government Debt Burden
[Defense + SSA + Education + Health + Bailouts]

Increasing Costs of Doing Business

- Price of Oil / Fuel / Energy / Shipping / Transportation
- Wages
- Benefits – Health Care

Challenges Facing the US Economy

Impact of Technology

- Automation – Mechanization of processes
- Computerization
- Displacement of some workers (& Rehab)
- Opportunities for other kinds of workers

Outsourcing

- RIF/JIT employees – Subcontract / Temp Help
Manufacturing & Service Sectors
- Offshoring

Employment Data

Occupation

- DOT
- O*NET
- OOH [National Only]
- Career Guide to Industry - CGI
- Current Population Survey (Census **CPS**)
- **OES** - Occupational Employment Survey
- National Compensation Survey
- Long Term Employment Projections
- State Labor Market Information Depts.

Employment/Industry

- JOLTS
- QCEW (ES-202)
Quarterly Census of Employment & Wages
- County Business Patterns
US / State / County / Zip
- [Input/Output Matrix]
- Business Listings
- Professional Associations
- Business Assn/Journals
- Manufacturer Guides

Decennial Census (2000, 2010)

- Population count of all U.S. Citizens
- Captures wide range of demographics, including occupation
- Two+ year reporting delay
- Self-reported information
- Occupation reported by Census Occupational Code (n=535)
- www.census.gov
- American Fact Finder – factfinder.census.gov
- American Community Survey - www.census.gov/acs
(ongoing survey of about 1% of population – 3 million/year)

Self-Employment

- U.S. Census Bureau
- Census 2000 Alphabetic Index of Industries
- Lists the Industry Title, the Census Industry Code, NAICS code, and the Census Occupation Code
- <http://www.census.gov/people/io/>

Current Population Survey - CPS

- Conducted by Bureau of the Census
- Gender; Full-Time; Part-Time; Self-Employed workers
- 60,000 contacts/month among pool of 210,000 households
- Gathered monthly; aggregated and reported annually in January for the prior year
- Published data vs. “unpublished” - Table A26
- Occupation, industry, unemployed reason, hours
- Survey of Households [not employers]
- National Data only – Captures gender data
- www.bls.gov/cps

OES – Occupational Employment Survey

- 840 SOC (= 820 OES) occupations (F-T & P-T)
- Survey based on responses by 1.2 million non-farm employers
- Does not include self-employed or agricultural industry
- National, State, Metropolitan & Non-Metro (Rural) Regions
- Minimum reporting is 50 in an area (if not all at one firm)
- Data collected during a 3 year survey cycle of 450 industries
- Reported using a rolling average of employment & wage ranges
- > 70% response rate required for publication
- Released once per year in Spring
- www.bls.gov/oes

SIC - 1987

0x – Agriculture
10-14 – Mining
15-17 – Construction
2x-3x – Manufacturing
4x – Transportation, Utilities
50-51 – Wholesale
52-59 – Retail
6x – Finance, Insurance, Real Estate
7x-8x – Services
9x - Public Administration [Govt.]

www.bls.gov/bls/naics.htm

Industry Classifications

NAICS 2007/2012

11 – Agriculture
21 – Mining, Quarrying, Oil-Gas Extraction
22 – Utilities
23 – Construction
31-33 – Manufacturing
42 – Wholesale Trade
44-45 – Retail Trade
48-49 – Transportation / Warehousing
51 – Information
52 – Finance / Insurance
53 – Real Estate / Rental / Leasing
54 – Professional / Scientific / Technical
55 – Management of Companies
56 – Administrative / Support / Waste Mgmt
61 – Educational Services
62 – Health Care and Social Assistance
71 – Arts, Entertainment, Recreation
72 – Accommodation / Food Services
81 – Other Services
92 – Public Administration
[Fed/State/Local Govt.]

OES – Long Term Employment Projections

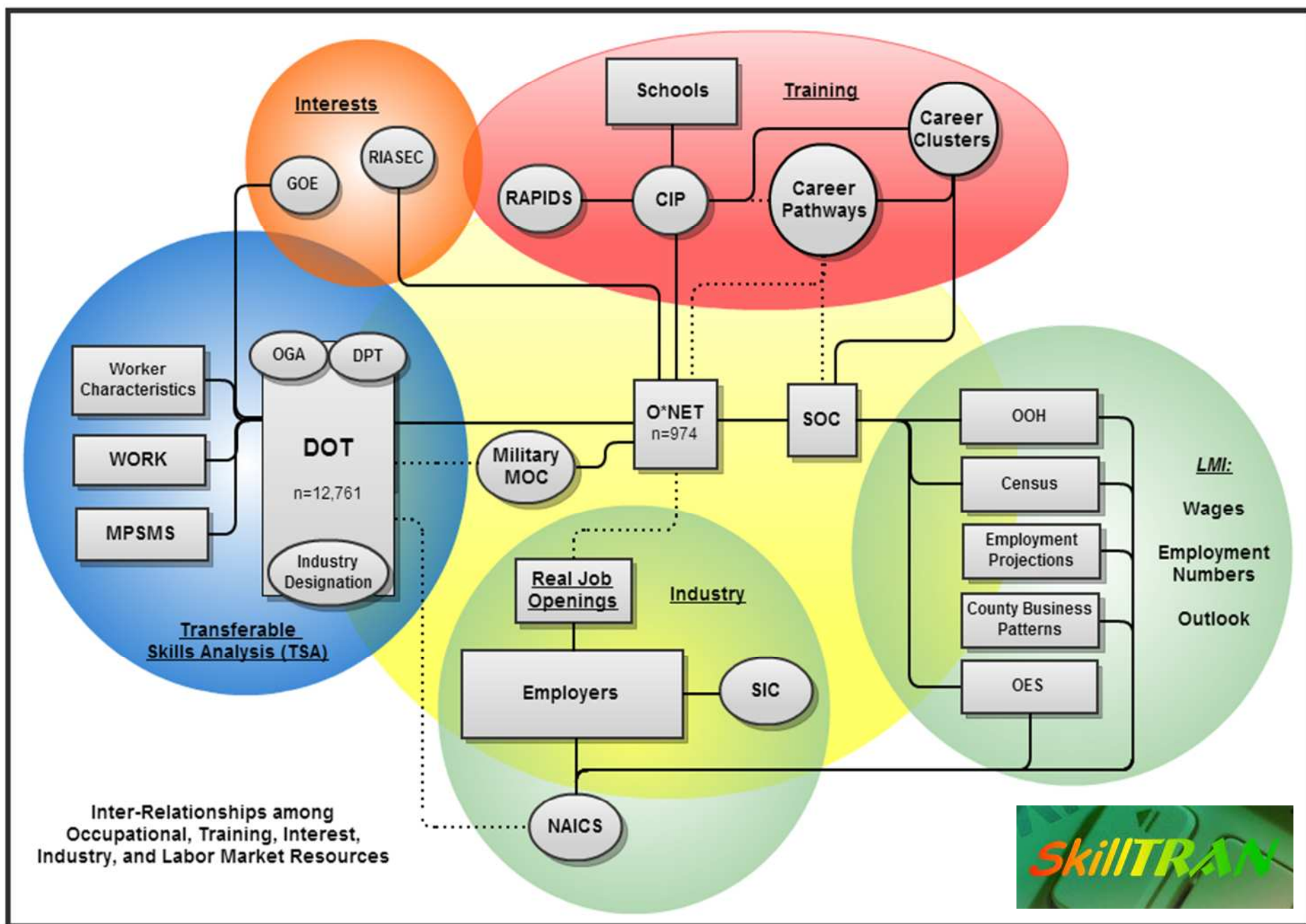
- Updated every two years
- Shows projections for occupations by industry
- Uses OES Survey data plus Current Employment Statistics (CES) and the CPS
- Cites 300+ NAICS industries for 700+ OES groups
- Data suppressed if < 50 workers in an industry
- 10 year projection model uses labor force, aggregate economy, final demand (GDP), industry output, employment by industry, and employment by occupation
- www.bls.gov/emp/home.htm

NCS – National Compensation Survey

- Employer survey of salaries, wages and benefits (F-T & P-T)
 - Reports by SOC (OES) codes
 - Nuances within occupations (work levels)
 - www.bls.gov/NCS
-
- Now focusing on possible data collection for physical demand elements by SOC/O*NET code
 - <http://bls.gov/ors/>

State Labor Market Information Sources

- Should be available on web for most states
- Check here for your state:
www.bls.gov/bls/ofolist.htm



LMI Interpretation Challenges: Employment Numbers

- Data Source Limitations
 - Source of survey responses:
Household (CENSUS)
Employers (OES)
 - Not available for all industries
- Data aggregated to occupational groups
- Various Methodologies & Assumptions
- Simple Math

Data

Aggregation

23% of DOT titles have 15 or less DOT codes in these 620 SOC/OES Groups

Data

Aggravation

77% of DOT titles have more than 15 DOT codes in these 133 SOC/OES Groups

N SOC Groups	N DOTS / SOC Group	DOTs Covered	%	Accum
151	1	151	1.2%	1.2%
94	2	188	1.5%	2.7%
64	3	192	1.5%	4.2%
59	4	236	1.8%	6.0%
55	5	275	2.2%	8.2%
37	6	222	1.7%	9.9%
34	7	238	1.9%	11.8%
20	8	160	1.3%	13.0%
22	9	198	1.6%	14.6%
25	10	250	2.0%	16.5%
9	11	99	0.8%	17.3%
14	12	168	1.3%	18.6%
13	13	169	1.3%	19.9%
12	14	168	1.3%	21.3%
11	15	165	1.3%	22.6%
33	16-20	589	4.6%	27.2%
31	21-30	779	6.1%	33.3%
15	31-40	536	4.2%	37.5%
14	41-50	636	5.0%	42.5%
24	51-100	1697	13.3%	55.8%
9	100-200	1254	9.8%	65.6%
3	201-300	765	6.0%	71.6%
4	300+	3628	28.4%	100.0%

Pitfalls when Interpreting **Government Data**

- Nearly all government statistics are aggregated for a group of DOT occupations
- Simple math requires this erroneous assumption:
All DOT occupations in a given statistical group occur with equal frequency
- The number of DOT occupations in a CENSUS Group may be different than the number in the similar OES Group

Erroneous Assumptions **Using Simple Math**

- All DOT occupations in a SOC/OES/CENSUS group occur with equal frequency
- The number of sedentary or light jobs in a given labor market can be determined for a single SOC/OES/CENSUS group independent of the presence/absence of relevant industry and changing economic conditions

OCCUPATIONAL GROUP - "CASHIERS"

CENSUS GROUP = 4720

OES GROUP = 41-2011

Auction	AUCTION CLERK (retail)	AUCTION CLERK
Retail	CASHIER II (retail)	CASHIER II
Self-service store	CASHIER, COURTESY BOOTH (retail)	CASHIER, COURTESY BOOTH
Dept. Store (Old)	CASHIER, TUBE ROOM (retail)	CASHIER, TUBE ROOM
Retail	CASHIER-CHECKER (retail)	CASHIER-CHECKER
Retail	CASHIER-WRAPPER (retail)	CASHIER-WRAPPER
Gambling	CHANGE PERSON (amusement/recreation)	OES 41-2012 GAMING CHANGE
	CHECK CASHIER (business services)	CHECK CASHIER
Sales Route	DRIVERS'-CASH CLERK (motor transportation)	DRIVERS'-CASH CLERK
	FOOD CHECKER (hotel & restaurant)	FOOD CHECKER
Racetrack	INFORMATION CLERK-CASHIER (amusement & recreation)	INFORMATION CLERK-CASHIER
Racetrack	MONEY COUNTER (amusement & recreation)	MONEY COUNTER
Racetrack	PARIMUTUEL-TICKET CASHIER (amusement & recreation)	PARIMUTUEL-TICKET CASHIER
Racetrack	PARIMUTUEL-TICKET SELLER (amusement & recreation)	PARIMUTUEL-TICKET SELLER
Racetrack	PAYMASTER OF PURSES (amusement & recreation)	PAYMASTER OF PURSES
Racetrack	SHEET WRITER ((amusement & recreation)	SHEET WRITER
	TELLER (utilities)	TELLER
	TICKET SELLER (clerical)	TICKET SELLER
Toll Road	TOLL COLLECTOR (government services)	TOLL COLLECTOR
	N = 19	N = 18

US Publishing

- Uses Census-based data
- [Uses OES-based data]
- Updated Quarterly using QCEW (?)
- Simple math approach
- Assumes equal frequency distribution of DOT occupations within a statistical group
- Assumes constant, proportionate change in size of the labor force in a given geographic area over time
- www.uspublishing.net [Is a private company]



U.S. Publishing – Occupational Employment Quarterly II

OES-SOC = 43-5111 Weighers, Measurers, Checkers, and Samplers, Recordkeeping

	Nemployed	Percent of N	Estimated N DOTs	ACTUAL N DOTs	Percent of DOTs
S-Unsk	0	0.0%	0	0	0.0%
L-Unsk	27602	33.3%	11	11	100.0%
M-Unsk	2512	3.0%	1	1	100.0%
H-Unsk	0	0.0%	0	0	0.0%
S-SS	2507	3.0%	1	1	100.0%
L-SS	25093	30.3%	10	10	100.0%
M-SS	15056	18.2%	6	6	100.0%
H-SS	2517	3.0%	1	1	100.0%
S-SK	0	0.0%	0	0	0.0%
L-SK	5019	6.1%	2	2	100.0%
M-SK	2509	3.0%	1	1	100.0%
H-SK	0	0.0%	0	0	0.0%
N	82815	100.0%	33	33	100.0%

Per OEQII sample page posted at www.uspublishing.net for Third Quarter 2007



U.S. Publishing – Occupational Employment Quarterly II

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L-SK	5019	6.1%	2	2	6.1%	
M-SK	2509	3.0%	1	1	3.0%	
H-SK	0	0.0%	0	0	0.0%	
N	82815	100.0%	33	33	100.0%	

Per OEQII sample page posted at www.uspublishing.net for Third Quarter 2007

Erroneous Example

OES 51-9111 – Packaging and Filling Machine Operators and Tenders

This OES Group has 74 DOT Occupations

The Denver MSA has 1,820 jobs in this OES/SOC Group (5/2013).

“Therefore, there are:”

Sedentary	1	1%	18
Light	44	59%	1,074
Medium	19	26%	473
Heavy	10	14%	255
Very Heavy	0	0%	0
<hr/>			
74			<hr/>
			1,820

Industry Context Occupational Density

Similar to Population Density:

- Frequency of occurrence of occupation(s)
- Specific Geographic Area
(ZIP, City, County, MSA, State, Regional, National)

More complex issues:

- Jobs do not exist in a vacuum; need presence of employers
- Employers are categorized by industry
- Staffing pattern for occupations varies by industry and by company size
- Method to estimate data at the DOT level from aggregate data (I.e. OES / SOC)

Industry Context

SkillTRAN Core Assumptions

- 1) Jobs exist to fulfill a business activity
- 2) The conduct of a specific business activity requires specific occupations
- 3) Staffing patterns change by industry

Industry Context

SkillTRAN Core Assumptions

- 4) Business activity is influenced by various factors: Opportunity, Automation, Outsourcing, Competition, External Economic Factors, Restructuring
- 5) In a specific business activity, there may only be one or a few specific occupations
- 6) A business may need to be of a certain size (N employees) before a specific occupation exists

SkillTRAN

Industry Context Method

- Long Term Employment Projections yield an Occupational Density Factor by relevant industry
- Weight for other DOT occupations in each industry
- Sum the Density Factors for relevant industries for a specific DOT
- Multiply the summed density factor by the OES Employment Number to estimate employment at the DOT level
- [Estimate minimum size of company]
- [Adjust for frequency of relevant industries in a regional area (or commuting radius)]
- [Confirm results with Labor Market Sampling]

Sources of Error

- ESTIMATION process not = ACTUAL
- Greater validity at the national level
- Long-Term Projections do not reflect Short-Term / Recessionary Impact
- OES sample size will shrink
- Does not consider collapse of several DOTs into one new occupation
- Does not update the DOT, but it should help to identify some obsolete/obscure occupations.

Examples of Employment Number Estimates

- Cashier II
- Parking Lot Cashier | Gas Station Clerk
- Parimutuel Ticket Seller
- Surveillance System Monitor
- Bottle Packer
- Housekeeping Cleaner
- Marker (Retail)
- Collator
- Microfilm Operator

Long Term Outlook

211.462-010 CASHIER II
 OUTLOOK INFORMATION
 for OOH Occupation: Cashiers

Overall cashier employment is expected to decline, but job growth will be strong for gaming cashiers. Opportunities for full-time and part-time jobs are expected to be good because of the need to replace the large number of workers who leave this occupation.

U.S. National Long Term Employment Outlook
 Related OES Statistical Group: 41-2011 Cashiers, except gaming
 This OES statistical group has 18 specialty occupations (unique DOT occupations)
 All employment projections are for the entire OES Statistical Group, NOT an individual DOT occupation.

Employed 2008

 % Occ. Density
 # Employed 2018
 % Change
 # Change
 NAICS
 NAICS Industry where employed

3,549,960	3,612,705	100.000	3,675,450	3.53	125,490	TOT001	Total employment, all workers
3,507,960	3,569,670	98.805	3,631,380	3.51	123,430	WSE100	Total wage and salary employment
3,507,010	3,568,750	98.780	3,630,490	3.52	123,470	WSE110	Wage and salary employment, except agricu
2,918,210	2,965,285	82.075	3,012,360	3.22	94,150	440000-450	Retail trade
967,360	964,200	26.690	961,040	-0.65	-6,320	445000	Food and beverage stores
850,050	850,805	23.550	851,560	0.17	1,510	445100	Grocery stores
569,450	634,255	17.525	699,060	22.76	129,610	452000	General merchandise stores

DATA SOURCES: Bureau of Labor Statistics, U.S. Dept. of Labor, *Employment Projections: 2008-2018* (2009).
 Available at <http://www.bls.gov/emp>

Long Term Occupational Outlook

Long Term Outlook

211.462-010 CASHIER II

 OUTLOOK INFORMATION
 for OOH Occupation: Cashiers

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U. S. National Long Term Employment Outlook
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 This OES statistical group has 18 specialty occupations (unique DOT occupations)
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Employed 2008

2013

% Occ. Density

Employed 2018

527,335

% Change

Change

NAICS

NAICS Industry where employed

Show All DOTs in this OES Group

569,450	634,255	17.525	699,060	22.76	129,610	452000	General merchandise stores
546,390	527,335	14.605	508,280	-6.97	-38,110	447000	Gasoline stations
546,390	527,335	14.605	508,280	-6.97	-38,110	447100	Gasoline stations
344,190	415,205	11.455	486,220	41.26	142,030	452900	Other general merchandise stores
273,950	273,685	7.570	273,420	-0.19	-530	720000	Accommodation and food services
257,090	256,300	7.095	255,510	-0.61	-1,590	722000	Food services and drinking places
229,090	239,105	6.610	249,120	8.74	20,020	446000	Health and personal care stores

DATA SOURCES: Bureau of Labor Statistics, U.S. Dept. of Labor, *Employment Projections: 2008-2018* (2009).
 Available at <http://www.bls.gov/emp>

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Long Term Occupational Outlook

Employment Numbers- 211.462-010 - CASHIER II

OOH Group | CENSUS Group | OES Group | DOT Employment Estimate

Occupational Employment Survey (OES) - Employment Data - May 2013
For OES Statistical Group: 41-2011 Cashiers
Employment numbers below are for the entire OES group, usually NOT an individual DOT occupation
This OES statistical group has 18 unique DOT occupations

☒ **National Statistics** **Full-Time:** 48.3% **Part-Time:** 51.7% **Self:** 1.0% [Show All DOTs in this OES Group](#)

State: Colorado **Region:** Denver-Aurora-Broomfield, CO [Show Counties](#)

211.462-010 CASHIER II

Related OES Statistical Group: 41-2011 - Cashiers

This OES group has 18 specialty occupations (unique DOT codes). Data below is for the OES Statistical group, usually NOT for a single DOT occupation.

May 2013 - U.S. NATIONAL Occupational Employment Survey (OES): National Data

Estimated total National employment in this OES group = 3,343,470 ± 13,374 CI*

May 2013 - STATEWIDE Occupational Employment Survey (OES): Colorado

Estimated total Statewide employment in this OES group = 52,420 ± 1,415 CI*

May 2013 - REGIONAL (Metropolitan / Non-Metro / Rural) Occupational Employment Survey (OES): Denver-Aurora-Broomfield, CO

Estimated total Regional employment in this OES group = 26,080 ± 1,252 CI*
Region: Adams County, Arapahoe County, Broomfield County, Clear Creek County, Denver County, Douglas County, Elbert County, Gilpin County, Jefferson County, Park County

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Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014 DOT: 211.462-010 CASHIER II

ALTERNATE JOB TITLES (Might also be known as):

CHANGE-BOOTH CASHIER; CASHIER, PARKING LOT; CASHIER, SELF-SERVICE GASOLINE; BILLING CASH CLERK; C STORE CLERK; C-STORE CLERK; CASH CLERK; CASHIER II; CASHIER, CREDIT; CASHIER, GENERAL; CASHIER, OFFICE; CASHIER, PAYMENTS RECEIVED; CONVENIENCE STORE CLERK; FLOOR CASHIER; GAS STATION CASHIER; GAS STATION CLERK; STORE CASHIER; TICKET CLERK; CAFETERIA CASHIER; DINING-ROOM CASHIER; SERVICE-BAR CASHIER

CASH CLERK; CASHIER, GENERAL; CASHIER, OFFICE; TICKET CLERK. Receives cash from customers or employees in payment for goods or services and records amounts received; Recomputes or computes bill, itemized lists, and tickets showing amount due.

OES Group **41-2011 Cashiers**

Estimate OES Industry Employment Numbers for: **Denver-Aurora-Broomfield, CO**

☐ National
☐ Statewide
☒ Regional

Remove

NAICS

NAICS Title

Estimated %
For this OES Group

N

N DOTs

Estimated %
For this DOT

N

<input type="checkbox"/>	420000 Wholesale trade	0.604	158	1	0.604	158
<input type="checkbox"/>	441100 Automobile dealers	0.560	146	1	0.560	146
<input type="checkbox"/>	444100 Building material and supplies dealers	3.008	784	2	WT	392
<input type="checkbox"/>	445100 Grocery stores	23.472	6,121	3	WT	2,040
<input type="checkbox"/>	445200 Specialty food stores	1.158	302	1	1.158	302
<input type="checkbox"/>	445300 Beer, wine, and liquor stores	1.944	507	1	1.944	507
<input type="checkbox"/>	447100 Gasoline stations	14.448	3,768	1	14.448	3,768
<input type="checkbox"/>	448100 Clothing stores	3.416	891	4	WT	223

Adjust Estimates by
Employment Status

☒ Full-Time 48.3%
☒ Part-Time 51.7%
Self-Empl: 1.0%

TOTAL EMPLOYMENT
IN THIS OES GROUP

3,343,470 National
52,420 State
26,080 Region

Industry Employment of
this OES Group

86.726% Percent
2,899,658 US National
45,462 State: Colorado
22,618 Region:

Estimated # Employed in
this DOT Code

50.827%
1,699,396
26,644
13,256

CPS Estimate:

Men 28.4% Women 71.6%

Show/Add More Related Industries for this OES Group

Print

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Estimated National Distribution

Estimated National Distribution of DOT Employment of:

OES: **41-2011 Cashiers**

Within NAICS **445100 Grocery stores**

Distrb. %	DOT Code	DOT Title	Industry Sort	Strength	SVP	RML	O*NET
33.33	211462010	CASHIER II (clerical)		L	2	322	41-2011.00
33.33	211462014	CASHIER-CHECKER (retail trade)		L	3	322	41-2011.00
33.33	211467010	CASHIER, COURTESY BOOTH (retail trade)		L	4	333	41-2011.00

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Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014 DOT: 211.462-010 CASHIER II

ALTERNATE JOB TITLES (Might also be known as):

CHANGE-BOOTH CASHIER; CASHIER, PARKING LOT; CASHIER, SELF-SERVICE GASOLINE; BILLING CASH CLERK; C STORE CLERK; C-STORE CLERK; CASH CLERK; CASHIER II; CASHIER, CREDIT; CASHIER, GENERAL; CASHIER, OFFICE; CASHIER, PAYMENTS RECEIVED; CONVENIENCE STORE CLERK; FLOOR CASHIER; GAS STATION CASHIER; GAS STATION CLERK; STORE CASHIER; TICKET CLERK; CAFETERIA CASHIER; DINING-ROOM CASHIER; SERVICE-BAR CASHIER

CASH CLERK; CASHIER, GENERAL; CASHIER, OFFICE; TICKET CLERK. Receives cash from customers or employees in payment for goods or services and records amounts received; Recomputes or computes bill, itemized lists, and tickets showing amount due.

OES Group **41-2011 Cashiers**

Estimate OES Industry Employment Numbers for: **Denver-Aurora-Broomfield, CO**

☐ National
 ☐ Statewide
 ☒ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	420000	Wholesale trade	0.292	76	1	0.292	76
<input type="checkbox"/>	441100	Automobile dealers	0.270	71	1	0.270	71
<input type="checkbox"/>	444100	Building material and supplies dealers	1.453	379	2	0.726	189
<input type="checkbox"/>	445100	Grocery stores	11.337	2,957	3	3.779	986
<input type="checkbox"/>	445200	Specialty food stores	0.559	146	1	0.559	146
<input type="checkbox"/>	445300	Beer, wine, and liquor stores	0.939	245	1	0.939	245
<input type="checkbox"/>	447100	Gasoline stations	6.978	1,820	1	6.978	1,820
<input type="checkbox"/>	448100	Clothing stores	1.650	430	4	0.412	108

Adjust Estimates by Employment Status

☒ **Full-Time** 48.3%
☐ **Part-Time** 51.7%
Self-Emp: 1.0%

TOTAL EMPLOYMENT IN THIS OES GROUP

3,343,470	National
52,420	State
26,080	Region

Industry Employment of this OES Group

41.889%	Percent
1,400,535	US National
21,958	State: Colorado
10,925	Region:

Estimated # Employed in this DOT Code

24,550%
820,808
12,869
6,403

CPS Estimate: Men 28.4% Women 71.6%

Denver-Aurora-Broomfield, CO

Industries Employing This OES Group

Occupational Density Estimate for: **DOT: 211.462-010 CASHIER II**

Industries Reporting Employment of this OES Group:
41-2011 Cashiers

{Click the ADD checkbox for each relevant industry row for the specific DOT occupation}

Add	OccDen%	NAICS	Title
<input type="checkbox"/>	0.11	711200	Spectator sports
<input type="checkbox"/>	0.05	711300-400	Promoters of events, and agents and managers
<input type="checkbox"/>	0.01	711500	Independent artists, writers, and performers
<input type="checkbox"/>	0.14	712000	Museums, historical sites, and similar institutions
<input type="checkbox"/>	0.14	712100	Museums, historical sites, and similar institutions
<input type="checkbox"/>	1.14	713000	Amusement, gambling, and recreation industries
<input type="checkbox"/>	0.25	713100	Amusement parks and arcades
<input type="checkbox"/>	0.14	713200	Gambling industries
<input type="checkbox"/>	0.74	713900	Other amusement and recreation industries
<input type="checkbox"/>	0.18	713940	Fitness and recreational sports centers
<input type="checkbox"/>	7.71	720000	Accommodation and food services
<input type="checkbox"/>	0.47	721000	Accommodation, including hotels and motels
<input type="checkbox"/>	0.28	721110,90,	Hotels (except casino), motels, and all other traveler accommodat
<input checked="" type="checkbox"/>	0.16	721120	Casino hotels
<input type="checkbox"/>	0.03	721200	RV (recreational vehicle) parks and recreational camps
<input type="checkbox"/>	7.24	722000	Food services and drinking places

Clipboard Help Close

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014

DOT: 211.467-018 PARIMUTUEL-TICKET CASHIER

ALTERNATE JOB TITLES (Might also be known as):

MUTUEL CASHIER; PARIMUTUEL CASHIER; PARIMUTUEL-TICKET CASHIER

MUTUEL CASHIER; PARIMUTUEL CASHIER. Cashes winning parimutuel tickets for patrons at race track; Posts official race results and value of winning tickets on worksheet to compute payouts. Compares ticket submitted by patron with sample to determine validity. Pays winnings to patron. Summons security personnel to apprehend persons attempting to cash fraudulent tickets, or directs patron to INFORMATION CLERK-CASHIER (amuse. & rec.) or to supervisory personnel to resolve questions of ticket validity. Records number of tickets cashed and amount paid out after each race. Requisitions additional cash from MONEY COUNTER (amuse. & rec.) as required.

Strength

Light

SVP

2

OES Group 41-2011 Cashiers

Estimate OES Industry Employment Numbers for: Denver-Aurora-Broomfield, CO

☐ National
☐ Statewide
☒ Regional

Show Counties

Show All DOTs in this OES Group

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	711200	Spectator sports	0.056	15	6	WT	0.009
<input type="checkbox"/>	713200	Gambling industries	0.071	18	2	WT	0.035
<input type="checkbox"/>	721120	Casino hotels	0.080	21	1		0.080

Adjust Estimates by Employment Status

☒ Full-Time 48.3%
☐ Part-Time 51.7%
Self-Empl: 1.0%

TOTAL EMPLOYMENT
IN THIS OES GROUP

3,343,470 National
52,420 State
26,080 Region

Industry Employment of
this OES Group

0.207% Percent
6,912 US National
108 State: Colorado
54 Region:
Denver-Aurora-Broomfield, CO

Estimated # Employed in
this DOT Code

0.125%
4,172
65
33

CPS Estimate: Men 28.4% Women 71.6%

Show/Add More Related Industries for this OES Group

Print

Help

Close

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014 **DOT:** 379.367-010 SURVEILLANCE-SYSTEM MONITOR

ALTERNATE JOB TITLES (Might also be known as):

SURVEILLANCE-SYSTEM MONITOR

Monitors premises of public transportation terminals to detect crimes or disturbances, using closed circuit television monitors, and notifies authorities by telephone of need for corrective action; Observes television screens that transmit in sequence views of transportation facility sites. Pushes hold button to maintain surveillance of location where incident is developing, and telephones police or other designated agency to notify authorities of location of disruptive activity. Adjusts monitor controls when required to improve reception, and notifies repair service of equipment malfunctions.

OES Group **33-9099 Protective Service Workers, All Other**

Estimate OES Industry Employment Numbers for: **Denver-Aurora-Broomfield, CO**

☐ National
 ☐ Statewide
 ☒ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	452100	Department stores	2.510	42	1	2.510	42
<input type="checkbox"/>	488100	Support activities for air transportation	0.297	5	1	0.297	5
<input type="checkbox"/>	561600	Investigation and security services	1.908	32	2	0.954	16
<input type="checkbox"/>	930000	Government	12.546	208	4	3.137	52

Adjust Estimates by Employment Status

☒ **Full-Time** 34.5%
☐ **Part-Time** 65.5%
Self-Emp: 0.2%

TOTAL EMPLOYMENT IN THIS OES GROUP

96,260	National
3,520	State
1,660	Region

Industry Employment of this OES Group

17.261 %	Percent
16,615	US National
608	State: Colorado
287	Region:
	Denver-Aurora-Broomfield, CO

Estimated # Employed in this DOT Code

6.897%
6,639
243
114

CPS Estimate: Men 47.7% Women 52.3%

Strength
Sedentary

SVP
2

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014 DOT: 920.685-026 BOTTLE PACKER

ALTERNATE JOB TITLES (Might also be known as):

BOTTLE PACKER; CASER

CASER. Tends machine that inserts filled beer bottles into cardboard cartons: Positions empty carton on platform below automatic packer. Presses pedal to raise platform to packer level and to deposit bottles in carton. Releases pedal and pushes full carton onto conveyor. Straightens or resets partitions in carton.

Strength
Light

SVP
2

OES Group 51-9111 Packaging and Filling Machine Operators and Tenders

Estimate OES Industry Employment Numbers for: Denver-Aurora-Broomfield, CO

☐ National
 ☐ Statewide
 ☒ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	312100	Beverage manufacturing	4.917	89	2	WT	45

Adjust Estimates by Employment Status

☒ Full-Time 88.5%
☐ Part-Time 11.5%
 Self-Emp: 0.0%

TOTAL EMPLOYMENT IN THIS OES GROUP

372,210	National
3,520	State
1,820	Region

Industry Employment of this OES Group

4.917%	Percent
18,302	US National
173	State: Colorado
89	Region:
	Denver-Aurora-Broomfield, CO

Estimated # Employed in this DOT Code

2,459
9,151
87
45

CPS Estimate: Men 46.3% Women 53.7%

SkillTRAN

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2014 **DOT:** 323.687-014 CLEANER, HOUSEKEEPING

ALTERNATE JOB TITLES (Might also be known as):
 CLEANER, HOUSEKEEPING; HOUSE AID; MAID; MAID/DESK CLERK; NIGHT CLEANER; ROOM ATTENDANT; UTILITY PERSON; MOTEL CLEANER; MOTEL/HOTEL HOUSEKEEPER; MOTEL/HOTEL MAID; SLEEPING ROOM CLEANER; BEAUTY PARLOR CLEANER

MAID: Cleans rooms and halls in commercial establishments, such as hotels, restaurants, clubs, beauty parlors, and dormitories, performing any combination of following duties: Sorts, counts, folds, marks, or carries linens. Makes beds. Replenishes supplies, such as drinking glasses, and writing supplies. Checks waste and renders personal assistance to patrons. Moves furniture, hangs drapes.

OES Group 37-2012 Maids and Housekeeping Cleaners
 Estimate OES Industry Employment Numbers for: **Denver-Aurora-Broomfield, CO**

☐ National ☐ Statewide ☒ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input checked="" type="checkbox"/>	452100	Department stores	0.006	1		0.006	
<input type="checkbox"/>	531100	Lessors of real estate	0.510	40	1	0.510	40
<input type="checkbox"/>	621100	Offices of physicians	0.123	10	1	0.123	10
<input type="checkbox"/>	621400	Outpatient care centers	0.051	4	1	0.051	4
<input type="checkbox"/>	622000	Hospitals, public and private	4.537	353	2	2.269	176
<input type="checkbox"/>	623000	Nursing and residential care facilities	4.655	362	2	2.328	181
<input type="checkbox"/>	713900	Other amusement and recreation industries	0.356	28	1	0.356	28
<input type="checkbox"/>	721000	Accommodation, including hotels and motels	17.179	1,337	2	8.590	668

Adjust Estimates by Employment Status
☒ **Full-Time** 59.7%
☐ **Part-Time** 40.3%
Self-Empl: 7.1%

TOTAL EMPLOYMENT IN THIS OES GROUP
917,470 National
17,290 State
7,780 Region

Industry Employment of this OES Group
28.040% Percent
257,258 US National
4,848 State: Colorado
2,182 Region:

Estimated # Employed in this DOT Code
14.854%
136,281
2,568
1,156

CPS Estimate: Men 15.2% Women 84.8%

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2013 **DOT:** 209.587-034 **MARKER**

ALTERNATE JOB TITLES (Might also be known as):
 MARKER; MARKING CLERK; MERCHANDISE MARKER; PRICE MARKER; TICKET MAKER
 MARKING CLERK; MERCHANDISE MARKER; PRICE MARKER; TICKET MAKER. Marks and attaches price tickets to articles of merchandise to record price and identifying information: Marks selling price by hand on boxes containing merchandise, or on price tickets. Ties, glues, sews, or staples price ticket to each article. Presses lever or plunger of mechanism that pins, pastes, ties, or staples ticket to article. May record number and types of articles marked and pack them in boxes. May compare printed price tickets with entries on purchase order to verify accuracy and notify supervisor of discrepancies. May print information on tickets, using ticket.

OES Group 43-5081 Stock Clerks and Order Fillers
 Estimate OES Industry Employment Numbers for: **National**
☒ National ☐ Statewide ☐ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	444100	Building material and supplies dealers	1.573	28,422	3	WT	0.524 9,474
<input type="checkbox"/>	444200	Lawn and garden equipment and supplies stores	0.134	2,424	2	WT	0.067 1,212
<input type="checkbox"/>	445100	Grocery stores	14.608	263,860	4	WT	3.652 65,965
<input type="checkbox"/>	445300	Beer, wine, and liquor stores	0.413	7,454	3	WT	0.138 2,485
<input type="checkbox"/>	448100	Clothing stores	2.338	42,239	4	WT	0.585 10,560
<input type="checkbox"/>	451000	Sporting goods, hobby, book, and music stores	0.718	12,969	2	WT	0.359 6,484
<input type="checkbox"/>	452000	General merchandise stores	18.949	342,278	2	WT	9.475 171,139
<input type="checkbox"/>	452100	Department stores	10.753	194,228	11	WT	0.978 17,657

Adjust Estimates by Employment Status
☒ **Full-Time** 67.1%
☐ **Part-Time** 32.9%
Self-Empl: 0.3%

TOTAL EMPLOYMENT IN THIS OES GROUP
 1,806,310 National
 203,830 State
 16,350 Region

Industry Employment of this OES Group
 58,478% Percent
 1,056,288 US National
 119,195 State: California
 9,561 Region: San Diego-Carlsbad-San Marcos, CA

Estimated # Employed in this DOT Code
 17,650%
 318,809
 35,975
 2,886

CPS Estimate: Men 66.8% Women 33.2%

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2013 **DOT:** 208.685-010 **COLLATOR OPERATOR**

ALTERNATE JOB TITLES (Might also be known as):
 COLLATOR OPERATOR
 Tends machine that assembles pages of printed material in numerical sequence: Adjusts control that regulates stroke of paper pusher, according to size of paper. Places pages to be assembled in holding trays. Starts machine. Removes assembled pages from machine.

Strength
 Light
SVP
 2

OES Group 43-9199 Office and Administrative Support Workers, All Other
 Estimate OES Industry Employment Numbers for: **National**
☒ National ☐ Statewide ☐ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	211100	Oil and gas extraction	0.012	27	4	WT	7
<input type="checkbox"/>	221000	Utilities	0.410	924	5	WT	185
<input type="checkbox"/>	221100	Electric power generation, transmission and distribution	0.260	585	4	WT	146
<input type="checkbox"/>	221200	Natural gas distribution	0.142	320	5	WT	64
<input type="checkbox"/>	334200	Communications equipment manufacturing	0.016	37	6	WT	6
<input type="checkbox"/>	334400	Semiconductor and other electronic component manufactur	0.057	128	6	WT	21
<input type="checkbox"/>	336000	Transportation equipment manufacturing	0.256	576	4	WT	144
<input type="checkbox"/>	336400	Aerospace product and parts manufacturing	0.162	366	6	WT	61

Adjust Estimates by Employment Status
☒ **Full-Time** 81.2%
☐ **Part-Time** 18.8%
Self-Empl: 6.6%

TOTAL EMPLOYMENT IN THIS OES GROUP
 225,310 National
 65,810 State
 7,170 Region

Industry Employment of this OES Group
 25.176% Percent
 56,724 US National
 16,568 State: California
 1,805 Region:
 San Diego-Carlsbad-San Marcos, CA

Estimated # Employed in this DOT Code
 6.228%
 14,033
 4,099
 447

CPS Estimate: Men 22.8% Women 77.2%

SkillTRAN

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2013 DOT: 976.682-022 MICROFILM-CAMERA OPERATOR

ALTERNATE JOB TITLES (Might also be known as):

MICROFILM-CAMERA OPERATOR

Operates microfilm unit camera to film documents: Selects and inserts format disk, turns knobs and flips switches to set controls of unit operation, such as exposure time, margin space, and camera action, according to format instructions. Selects specified camera lens according to document reduction ratios desired on film and slides lens into position on unit. Loads film into camera and splices film to device that facilitates movement of film through unit, using splicing tape. Positions documents on unit feed belt, depresses pedal to activate camera, and observes control panel to monitor unit operation. Replaces film or reprints documents, according to signal lights.

OES Group **43-9199 Office and Administrative Support Workers, All Other**

Estimate OES Industry Employment Numbers for: **National**

☒ National
 ☐ Statewide
 ☐ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	541500	Computer systems design and related services	0.414	933	2	WT 0.207	467

Adjust Estimates by Employment Status

☒ Full-Time 81.2%
☐ Part-Time 18.8%
 Self-Emp: 6.6%

TOTAL EMPLOYMENT IN THIS OES GROUP

225,310	National
65,810	State
7,170	Region

Industry Employment of this OES Group

0.414% Percent
 933 US National
 273 State: California
 30 Region:
 San Diego-Carlsbad-San Marcos, CA

Estimated # Employed in this DOT Code

0.207%
467
136
15

CPS Estimate: Men 22.8% Women 77.2%

SkillTRAN

Estimated DOT Employment Numbers

DOT Employment Estimate for: 2013 DOT: 976.682-022 MICROFILM-CAMERA OPERATOR

ALTERNATE JOB TITLES (Might also be known as):

MICROFILM-CAMERA OPERATOR

Operates microfilm unit camera to film documents: Selects and inserts format disk, turns knobs and flips switches to set controls of unit operation, such as exposure time, margin space, and camera action, according to format instructions. Selects specified camera lens according to document reduction ratios desired on film and slides lens into position on unit. Loads film into camera and splices film to device that facilitates movement of film through unit, using splicing tape. Positions documents on unit feed belt, depresses pedal to activate camera, and observes control panel to monitor unit operation. Replaces film or realigns documents according to signal lights.

OES Group **43-9199 Office and Administrative Support Workers, All Other**

Estimate OES Industry Employment Numbers for: **National**

☒ National
 ☐ Statewide
 ☐ Regional

NAICS Industries where this DOT Code is likely to be employed:

Remove	NAICS	NAICS Title	Estimated % For this OES Group	N	N DOTs	Estimated % For this DOT	N
<input type="checkbox"/>	511110	Newspaper publishers	0.682	1,537	5	WT	0.136 307
<input type="checkbox"/>	522000	Credit intermediation and related activities	2.282	5,141	1		2.282 5,141
<input type="checkbox"/>	524000	Insurance carriers and related activities	2.680	6,037	1		2.680 6,037
<input type="checkbox"/>	541500	Computer systems design and related services	0.414	933	2	WT	0.207 467

Adjust Estimates by Employment Status

☒ Full-Time 81.2%
☐ Part-Time 18.8%
 Self-Emp: 6.6%

TOTAL EMPLOYMENT IN THIS OES GROUP

225,310	National
65,810	State
7,170	Region

Industry Employment of this OES Group

6.058% Percent
 13,648 US National
 3,986 State: California
 434 Region:
 San Diego-Carlsbad-San Marcos, CA

Estimated # Employed in this DOT Code

5.305%
11,952
3,491
380

CPS Estimate: Men 22.8% Women 77.2%

ESTIMATED EMPLOYMENT NUMBERS USING SKILLTRAN METHODOLOGY **Grouped by OES & Industry**
BASIS: OES - May, 2008 Data & Long Term Industry Projections (2008-2018), Adjusted for 2010

DOT	Title	Strength	SVP	RML	O*NET	DOT Industry	ESTIMATED EMPLOYMENT		
							US	State	Region
219587010	PARIMUTUEL TICKET CHECKER (amusement/recreation)	S	2	333	43-3031.00	amusement/recreation	1,670		
349665010	SCOREBOARD OPERATOR (amusement/recreation)	S	2	323	27-2023.00	amusement/recreation	1,747		
782687046	SACK REPAIRER (any industry)	S	2	211	51-6031.02	any industry	1,077		
690686046	PLASTIC-DESIGN APPLIER (boot & shoe)	S	1	111	53-7063.00	boot & shoe	n/a		
690686066	TOGGLE-PRESS FOLDER-AND-FEEDER (boot & shoe)	S	2	111	53-7063.00	boot & shoe	1,135		
788687022	BUCKLER AND LACER (boot & shoe)	S	2	111	51-9198.01	boot & shoe	5		
788687114	SHANK TAPER (boot & shoe)	S	2	111	51-9198.01	boot & shoe	5		
788687158	VAMP-STRAP IRONER (boot & shoe)	S	2	111	51-9199.99	boot & shoe	27		
788687166	WHITE-SHOE RAGGER (boot & shoe)	S	2	111	51-9123.00	boot & shoe	30		
237367014	CALL-OUT OPERATOR (business services)	S	2	323	43-4041.02	business services	11,999		
249587014	CUTTER-AND-PASTER, PRESS CLIPPINGS (business services)	S	2	211	43-9061.00	business services	5,917		
249587018	DOCUMENT PREPARER, MICROFILMING (business services)	S	2	312	43-9061.00	business services	23,195		
673685042	CONVEX-GHINDER OPERATOR (button & notion)	S	2	211	51-9021.00	button & notion	189		
690685194	GRINDING-MACHINE OPERATOR, AUTOMATIC (button & notion)	S	2	212	51-9021.00	button & notion	189		
692685130	PINKING-MACHINE OPERATOR (button & notion)	S	2	212	51-9032.04	button & notion	174		
692685206	STOP ATTACHER (button & notion)	S	2	212	51-9199.99	button & notion	50		
692685266	ZIPPER TRIMMER, MACHINE (button & notion)	S	2	211	51-9032.04	button & notion	99		
734684010	FEATHER SHAPER (button & notion)	S	2	212	51-9199.99	button & notion	6		
734687010	ACE-TONE-BUTTON PASTER (button & notion)	S	2	111	51-9199.99	button & notion	-		
734687018	ASSEMBLER (button & notion)	S	2	111	51-9199.99	button & notion	n/a		
734687034	BUCKLE-WIRE INSERTER (button & notion)	S	1	111	51-9199.99	button & notion	n/a		
734687058	HOT-STONE SETTER (button & notion)	S	2	111	51-9199.99	button & notion	n/a		
734687074	SLIDE-FASTENER-CHAIN ASSEMBLER (button & notion)	S	2	211	51-9199.99	button & notion	n/a		
734687086	SPLITTER, HAND (button & notion)	S	2	111	51-9031.00	button & notion	577		
734687090	STICKER (button & notion)	S	1	111	51-9199.99	button & notion	33		
734687094	ZIPPER TRIMMER, HAND (button & notion)	S	2	222	51-9061.05	button & notion	326		
740687010	BUTTON SPINDLER (button & notion)	S	2	111	51-9123.00	button & notion	1,627		
521687010	ALMOND BLANCHER, HAND (canning & preserving)	S	1	111	51-9198.01	canning & preserving	993		
521687086	NUT SORTER (canning & preserving)	S	2	111	51-9061.05	canning & preserving	292		
205367014	CHARGE-ACCOUNT CLERK (clerical)	S	2	323	43-4111.00	clerical	2,526		
209587010	ADDRESSER (clerical)	S	2	212	43-9022.00	clerical	16,773		
239687014	TUBE OPERATOR (clerical)	S	2	212	43-5021.00	clerical	5,653		
615685014	CLEARANCE CUTTER (clock & watch)	S	2	211	51-4031.02	clock & watch	197		
715684010	ADJUSTER, ALARM MECHANISM (clock & watch)	S	2	212	51-9199.99	clock & watch	32		
715684026	BENCH HAND (clock & watch)	S	2	111	51-9199.99	clock & watch	32		
715684082	DIAL-SCREW ASSEMBLER (clock & watch)	S	2	212	51-9199.99	clock & watch	32		
715684138	LACQUERER (clock & watch)	S	2	111	51-9123.00	clock & watch	10		
715684146	OILER (clock & watch)	S	2	211	51-9199.99	clock & watch	46		
715684178	SET-STAFF FITTER (clock & watch)	S	2	211	51-9199.99	clock & watch	46		
715685038	MAINSRING WINDER AND OILER (clock & watch)	S	2	211	51-9199.99	clock & watch	46		
715685050	PRESS OPERATOR, PIERCE AND SHAVE (clock & watch)	S	2	211	51-4031.03	clock & watch	262		
715687010	BAND ATTACHER (clock & watch)	S	2	111	51-9199.99	clock & watch	32		
715687018	CRYSTAL ATTACHER (clock & watch)	S	2	111	51-9199.99	clock & watch	32		
715687022	DIAL BRUSHER (clock & watch)	S	2	111	51-9199.99	clock & watch	32		
715687026	DIPPER, CLOCK AND WATCH HANDS (clock & watch)	S	2	111	51-9123.00	clock & watch	10		
715687078	MAINSRING FORMER, ARBOR END (clock & watch)	S	2	212	51-9199.99	clock & watch	46		
715687082	MAINSRING FORMER, BRACE END (clock & watch)	S	2	211	51-9199.99	clock & watch	46		

PRELIMINARY ESTIMATED EMPLOYMENT NUMBERS USING SKILLTRAN METHODOLOGY **Grouped by OES & Industry**
BASIS: OES - May, 2008 Data & Long Term Industry Projections (2008-2018), Adjusted for 2010

DOT	Title	Strength	SVP	RMI	O*NET	DOT Industry	ESTIMATED EMPLOYMENT		
							US	State	Region
529665014	WASHROOM OPERATOR (sugar & confection)	S	2	211	51-9192.00	sugar & confection	n/a		
890686046	PLASTIC-DESIGN APPLIER (boot & shoe)	S	1	111	53-7063.00	boot & shoe	n/a		
713687018	FINAL ASSEMBLER (optical goods)	S	2	111	51-9199.99	optical goods	n/a		
713687026	LENS INSERTER (optical goods)	S	2	111	51-9199.99	optical goods	n/a		
729684018	DIAL MARKER (electrical equipment)	S	2	222	51-9123.00	electrical equipment	n/a		
732587010	GOLF-BALL TRIMMER (toy-sport equipment)	S	2	211	51-9199.99	toy-sport equipment	n/a		
732684062	FISHING-REEL ASSEMBLER (toy-sport equipment)	S	2	211	51-9199.99	toy-sport equipment	n/a		
734687018	ASSEMBLER (button & notion)	S	2	111	51-9199.99	button & notion	n/a		
734687034	BUCKLE-WIRE INSERTER (button & notion)	S	1	111	51-9199.99	button & notion	n/a		
734687058	HOT-STONE SETTER (button & notion)	S	2	111	51-9199.99	button & notion	n/a		
734687074	SLIDE-FASTENER-CHAIN ASSEMBLER (button & notion)	S	2	211	51-9199.99	button & notion	n/a		
739685050	TAPPER, SHANK (fabrication, nec)	S	2	211	51-9199.99	fabrication, nec	n/a		
739685054	UMBRELLA TIPPER, MACHINE (fabrication, nec)	S	2	111	51-9199.99	fabrication, nec	n/a		
779684034	LEVEL-VIAL SEALER (cutlery-hardware)	S	2	211	51-9199.99	cutlery-hardware	n/a		
976884018	MOUNTER, HAND (photofinishing)	S	2	211	51-9031.00	photofinishing	n/a		
919683022	ESCORT-VEHICLE DRIVER (motor transportation)	S	2	212	53-3033.00	motor transportation	26,469		
249587018	DOCUMENT PREPARER, MICROFILMING (business services)	S	2	312	43-9061.00	business services	23,195		
205367030	ELECTION CLERK (government services)	S	2	322	43-9061.00	government services	22,779		
209587010	ADDRESSER (clerical)	S	2	212	43-9022.00	clerical	16,773		
237367014	CALL-OUT OPERATOR (business services)	S	2	323	43-4041.02	business services	11,999		
379367010	SURVEILLANCE-SYSTEM MONITOR (government services)	S	2	313	33-9099.99	government services	11,785		
237367046	TELEPHONE QUOTATION CLERK (financial)	S	2	323	43-4171.00	financial	6,059		
249587014	CUTTER-AND-PASTER, PRESS CLIPPINGS (business services)	S	2	211	43-9061.00	business services	5,917		
239687014	TUBE OPERATOR (clerical)	S	2	212	43-5021.00	clerical	5,653		
731685014	STUFFER (toy-sport equipment)	S	2	211	51-9111.00	toy-sport equipment	3,661		
574685010	COATER, BRAKE LININGS (nonmetallic mineral)	S	2	212	51-9121.02	nonmetallic mineral	3,116		
739687182	TABLE WORKER (fabrication, nec)	S	2	111	51-9061.05	fabrication, nec	2,932		
585685062	LABEL PINKER (narrow fabrics)	S	2	211	51-6062.00	narrow fabrics	2,695		
205367014	CHARGE-ACCOUNT CLERK (clerical)	S	2	323	43-4111.00	clerical	2,526		
713684038	POLISHER, EYEGLASS FRAMES (optical goods)	S	2	211	51-4033.02	optical goods	2,213		
779687038	WAXER (glass products)	S	2	111	51-9198.01	glass products	2,170		
726684110	TOUCH-UP SCREENER, PRINTED CIRCUIT BOARD ASSEMBLY (electronic component)	S	2	212	51-9061.05	electronic component	1,836		
890685258	LAMINATOR I (leather products)	S	2	211	51-9041.02	leather products	1,797		
349685010	SCOREBOARD OPERATOR (amusement/recreation)	S	2	323	27-2023.00	amusement/recreation	1,747		
219587010	PARIMUTUEL-TICKET CHECKER (amusement/recreation)	S	2	333	43-3031.00	amusement/recreation	1,670		
725684018	STEM MOUNTER (light fixtures)	S	2	211	51-2022.00	light fixtures	1,662		
209587014	ORDER CLERK, FOOD AND BEVERAGE (hotel & restaurant)	S	2	312	43-4151.00	hotel & restaurant	1,627		
740687010	BUTTON SPINDLER (button & notion)	S	2	111	51-9123.00	button & notion	1,627		
559687014	AMPOULE SEALER (pharmaceuticals)	S	2	211	53-7064.00	pharmaceuticals	1,579		
726684050	FILM TOUCH-UP INSPECTOR (electronic component)	S	2	211	51-9061.05	electronic component	1,492		
713687034	POLISHER, IMPLANT (optical goods)	S	2	211	51-9022.00	optical goods	1,172		
890686066	TOGGLE-PRESS FOLDER-AND-FEEDER (boot & shoe)	S	2	111	53-7063.00	boot & shoe	1,135		
782687046	SACK REPAIRER (any industry)	S	2	211	51-8031.02	any industry	1,077		
726687030	LOADER, SEMICONDUCTOR DIES (electronic component)	S	2	212	51-9141.00	electronic component	1,010		
726687046	WAFER BREAKER, SEMICONDUCTORS (electronic component)	S	2	212	51-9141.00	electronic component	1,010		
521687010	ALMOND BLANCHER, HAND (canning & preserving)	S	1	111	51-9198.01	canning & preserving	993		
733685026	SMOOTHER (pen & pencil)	S	2	211	51-4033.02	pen & pencil	968		
739685046	TAPPER, BIT (fabrication, nec)	S	2	211	51-4199.99	fabrication, nec	863		

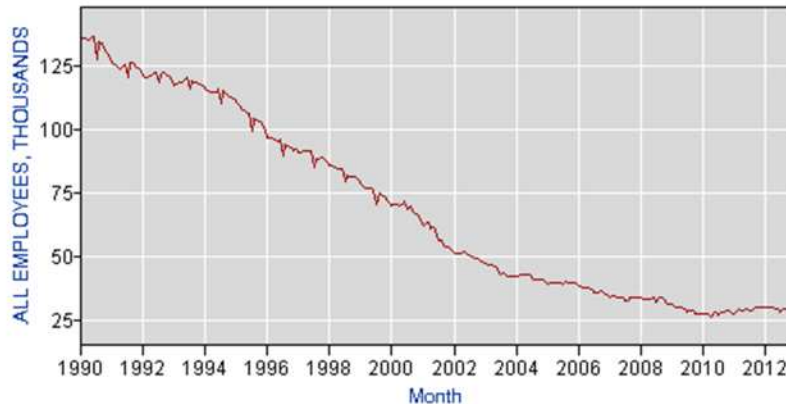
Sedentary – Unskilled Occupations

- There are 137 sedentary unskilled DOT occupations
- **113,000** of the estimated employment numbers (60% using the Industry Context method) cluster in 6 DOT occupations:
 - Escort Vehicle Driver (Not really sedentary) - 23%
 - Document Preparer, Microfilming (now digital scanning) – 21%
 - Election Clerk (civil service position – probably 50% P-T) - 20%
 - Addresser (hard to find since mostly automated .. combined) - 15%
 - Call-Out Operator (probably obsolete and automated now) - 11%
 - Surveillance System Monitor (assumes monitoring only) - 10%
- The remaining **73,937** estimated employed were spread across 131 DOT titles (Avg N = 564)
- Influence of rehabbers/occupational health
- See the handout spreadsheet for details –
By Industry Group and by Frequency

Sedentary – Unskilled Occupations

- Span 35 CENSUS Groups
- Span 38 OES Groups
- Span 44 DOT Industries
- 94 of the 137 (68.6%) are found in 13 NAICS
- 90% of the 137 are in the manufacturing sector
- Overall size of the workforce in these 13 NAICS industries during the last 22 years
- Data obtained directly from data.bls.gov
- Certain slides derived by subtraction

Series Id: CEU3232930001
 Not Seasonally Adjusted
 Super Sector: Nondurable Goods
 Industry: Leather and allied products
 NAICS Code: 316
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	134.8	135.7	135.7	135.3	135.5	136.6	127.3	134.6	133.8	132.1	129.9	127.2	133.2
1991	125.9	125.4	124.7	123.4	124.1	125.7	120.0	126.0	125.8	124.5	123.9	122.8	124.4
1992	121.1	120.5	120.1	120.9	121.3	122.0	118.6	121.5	122.0	121.8	121.2	118.9	120.8
1993	117.4	117.9	118.4	118.3	119.3	120.2	115.5	119.3	118.3	118.3	117.9	116.8	118.1
1994	115.6	115.2	114.5	114.8	114.6	115.5	110.1	115.0	114.0	113.2	112.4	111.7	113.9
1995	110.4	109.2	108.3	107.3	106.5	106.5	99.4	104.0	103.9	102.8	101.7	99.2	104.9
1996	96.7	96.8	96.6	96.0	95.3	96.0	89.7	93.8	93.1	92.9	91.4	92.3	94.2
1997	91.0	90.7	91.5	91.2	91.3	91.2	85.2	88.5	88.6	88.9	88.4	87.2	89.5
1998	85.7	85.7	85.4	84.6	84.2	84.3	79.4	81.8	81.0	81.5	81.0	79.7	82.9
1999	78.4	77.5	76.9	76.5	76.5	76.1	70.5	75.0	74.4	73.4	72.3	71.3	74.9
2000	69.9	70.4	70.4	69.8	70.4	71.5	68.4	69.4	67.8	66.6	66.4	64.1	68.8
2001	62.2	62.4	63.1	61.0	61.1	59.9	56.3	56.3	54.3	53.4	53.4	52.5	58.0
2002	51.4	51.3	50.9	51.3	51.8	51.4	50.5	49.6	49.1	49.2	48.6	47.8	50.2
2003	47.1	46.4	46.7	46.4	46.0	44.6	43.1	43.6	43.1	42.4	42.4	42.3	44.5
2004	41.9	42.2	42.8	42.9	43.0	42.6	41.8	40.9	41.1	40.7	40.9	40.2	41.8
2005	39.3	39.4	39.7	39.9	39.4	39.5	39.2	40.0	39.7	39.7	39.6	39.8	39.6
2006	38.6	38.2	37.5	37.7	37.7	37.0	36.0	36.0	36.1	36.2	35.3	35.0	36.8
2007	34.1	34.4	34.8	34.0	34.1	33.9	32.4	32.8	33.8	33.8	34.1	33.6	33.8
2008	34.0	33.0	33.3	33.3	33.3	34.0	32.0	33.8	34.0	33.0	31.6	31.4	33.1
2009	31.0	29.8	29.8	30.3	29.8	29.2	28.4	28.8	28.6	27.5	27.3	27.5	29.0
2010	27.4	27.3	27.4	26.5	27.3	27.8	26.8	28.3	28.3	28.8	28.8	28.4	27.8
2011	27.6	28.6	29.1	29.0	28.8	29.3	29.0	28.9	29.8	30.1	30.3	30.3	29.2
2012	30.3	30.3	29.9	29.9	29.4	29.4	28.3	29.1	29.2	28.7	28.8	29.0	29.4



Employment in the DOT
 “Boot & Shoe Manufacturing”
 industry – NAICS 3162 fell
 below the BLS threshold of
 15,000 workers nationally, so
 it is now rolled up into NAICS
 316 – Leather and Allied
 Products

There are 7 DOT occs. in this
 industry that are Sedentary
 Unskilled (including 1 DOT in
 the “Leather Products” DOT
 industry

Series Id: CEU3133999001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: All other miscellaneous durable goods manufacturing
 NAICS Code: 33993,4,9
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	217.6	218.4	218.8	219.6	220.7	222.8	218.6	221.9	224.0	222.7	219.8	215.3	220.0
1991	212.6	213.8	213.2	213.4	213.5	214.2	212.1	216.0	217.0	218.5	216.7	213.2	214.5
1992	211.5	213.1	213.5	215.5	216.1	218.6	216.1	219.2	219.6	220.5	220.1	216.7	216.7
1993	213.7	216.4	218.2	219.2	219.8	222.4	220.3	224.2	225.4	226.7	226.0	222.5	221.2
1994	220.6	221.8	223.4	224.1	225.0	226.8	224.4	227.5	229.1	230.1	228.7	225.1	225.6
1995	222.1	223.3	225.3	225.1	225.9	227.5	223.5	228.4	228.2	228.8	228.7	225.6	226.0
1996	222.2	223.4	223.6	224.0	225.6	227.8	224.6	227.9	227.6	228.5	228.4	224.7	225.7
1997	222.2	224.0	224.1	225.1	226.4	229.1	225.3	230.3	230.5	230.8	230.0	228.1	227.2
1998	225.5	228.0	228.9	229.0	228.8	230.0	228.0	229.9	230.8	229.1	227.1	225.5	228.4
1999	222.9	224.3	225.4	225.6	225.4	226.5	224.1	225.6	227.1	227.4	227.3	226.1	225.6
2000	222.7	224.3	223.9	222.0	222.4	224.6	222.9	225.4	224.0	225.0	225.7	224.4	223.9
2001	218.9	217.4	216.9	215.5	212.5	211.3	207.2	205.8	204.5	204.2	201.8	200.6	209.7
2002	197.7	195.4	195.5	195.7	195.6	196.6	194.6	197.3	198.0	197.4	197.8	194.4	196.3
2003	188.1	188.0	187.9	186.8	184.7	184.8	182.0	182.6	182.2	180.6	179.4	178.2	183.8
2004	175.9	177.6	178.2	179.2	179.7	181.1	178.8	178.3	178.6	181.2	180.4	179.6	179.1
2005	173.3	173.8	173.6	173.3	171.4	172.7	172.4	173.4	173.0	175.3	176.1	174.6	173.6
2006	169.6	170.6	170.7	171.1	167.2	167.4	165.3	168.6	168.6	170.5	170.6	168.9	169.1
2007	167.3	166.9	167.9	167.3	168.1	166.1	162.6	164.8	164.6	164.6	167.7	165.9	166.2
2008	161.0	159.4	158.4	156.8	154.2	153.8	151.4	153.1	150.9	151.9	150.9	149.0	154.2
2009	140.6	137.3	137.3	136.6	134.7	133.7	131.5	130.8	131.7	133.4	133.6	131.1	134.4
2010	129.0	128.8	128.2	130.2	131.2	130.4	133.0	132.0	132.8	133.8	134.1	132.2	131.3
2011	130.5	132.0	131.5	130.0	129.3	130.2	132.4	134.0	133.4	133.4	133.9	133.4	132.0
2012	132.2	132.8	132.3	131.8	132.3	132.1	132.6	133.4	134.2	135.1	135.0	135.0	133.2



Employment in the DOT
 “Button & Notion
 Manufacturing” industry –
 NAICS 339993 fell below the
 BLS threshold of 15,000
 workers nationally, so it is
 now rolled up into NAICS
 33993,4,9 – All other
 miscellaneous durable goods
 manufacturing

There are 15 DOT occs. in
 this industry that are
 Sedentary Unskilled

Series Id: CEU3133451901
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Miscellaneous electronic instruments
 NAICS Code: 334512,4,6-9
 Data Type: ALL EMPLOYEES, THOUSANDS



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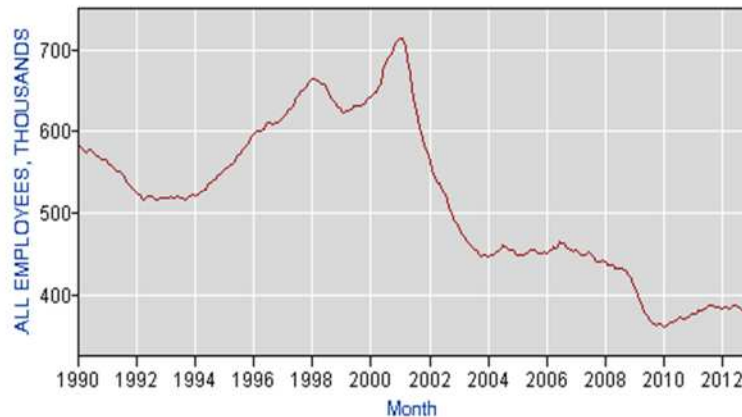
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	160.3	158.9	158.9	158.0	157.3	158.5	157.8	157.4	157.4	157.7	157.3	157.6	158.1
1991	156.2	154.4	154.1	152.7	151.1	151.5	150.2	150.0	150.0	149.9	149.7	149.5	151.6
1992	148.2	147.2	146.7	146.0	146.4	146.7	146.2	146.4	146.0	145.1	145.0	144.3	146.2
1993	143.6	143.1	142.8	142.7	142.4	142.2	141.5	141.0	140.1	140.1	140.5	141.0	141.8
1994	140.0	140.1	140.1	139.8	140.0	141.3	141.2	141.7	142.2	142.6	143.8	144.1	141.4
1995	144.4	144.8	144.4	144.1	144.1	144.9	144.7	144.8	144.7	145.0	145.4	146.1	144.8
1996	145.6	146.0	146.0	145.5	145.8	146.5	144.5	146.1	146.0	146.4	146.2	146.6	145.9
1997	146.4	146.3	146.3	146.4	146.4	147.3	146.6	148.0	147.8	147.5	147.8	148.2	147.1
1998	148.6	146.4	149.2	148.9	148.8	149.2	148.0	147.4	146.9	146.1	145.1	144.0	147.4
1999	142.5	143.0	141.7	140.9	140.3	141.0	141.5	140.7	139.9	139.9	139.5	140.5	141.0
2000	140.0	139.8	140.6	140.4	139.3	139.2	140.0	140.1	139.3	139.8	140.0	140.9	140.0
2001	141.5	140.8	139.8	139.2	139.4	139.2	138.0	137.3	134.9	135.1	134.1	133.8	137.8
2002	132.8	133.1	133.3	132.5	131.6	131.8	132.3	131.7	130.6	129.9	129.3	128.3	131.4
2003	129.3	127.8	127.4	124.1	124.4	123.8	123.9	124.1	123.0	121.9	122.7	122.7	124.6
2004	123.1	122.2	122.9	122.2	123.5	124.4	124.5	122.6	120.5	120.6	120.0	120.5	122.3
2005	120.4	120.2	119.8	119.6	119.0	119.9	119.7	120.0	119.4	120.3	119.9	118.2	119.7
2006	116.9	117.3	117.6	117.7	118.3	119.9	118.9	120.4	119.4	119.7	120.0	118.4	118.7
2007	119.0	118.2	116.6	116.7	118.1	118.4	116.8	116.5	114.2	114.3	114.5	115.8	116.6
2008	115.8	115.8	117.6	117.1	116.5	117.8	118.1	119.3	118.9	116.3	115.5	114.6	116.9
2009	112.7	112.3	111.2	111.2	108.6	108.3	107.9	107.2	106.4	105.6	105.4	104.1	108.4
2010	104.8	103.9	103.6	104.2	105.1	105.1	105.9	105.4	105.7	105.2	106.3	106.9	105.2
2011	106.9	106.0	105.8	106.5	106.3	106.7	106.5	106.5	105.8	105.5	105.0	105.5	106.1
2012	105.3	106.2	107.5	107.2	107.7	109.2	109.2	109.0	107.5	108.4	107.2	107.9	107.7



Employment in the DOT
 “Clock & Watch
 Manufacturing” industry –
 NAICS 334518 fell below the
 BLS threshold of 15,000
 workers nationally, so it is
 now rolled up into NAICS
 334512,4,6-9 –
 Miscellaneous electronic
 instruments (manufacturing)

There are 21 DOT occs. in
 this industry that are
 Sedentary Unskilled

Series Id: CEU3133440001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Semiconductors and electronic components
 NAICS Code: 3344
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	584.3	580.5	577.9	574.5	575.6	577.3	574.4	573.1	569.8	568.9	566.6	565.4	574.0
1991	561.7	559.9	557.2	553.4	551.6	552.0	548.1	543.2	538.1	535.1	531.6	526.8	546.6
1992	524.2	522.6	518.4	517.7	518.2	520.8	519.9	518.1	517.0	517.4	519.7	519.1	519.4
1993	518.3	519.3	520.6	519.0	518.8	520.8	518.0	518.2	517.7	519.0	521.4	522.1	519.4
1994	521.8	522.8	525.4	527.0	529.5	535.8	536.6	540.3	542.4	544.5	547.4	551.1	535.4
1995	553.3	555.0	557.7	559.8	563.0	570.3	571.9	576.0	579.8	583.9	587.8	593.8	571.0
1996	596.2	600.5	599.8	601.6	603.1	608.5	610.3	611.4	610.0	610.5	611.9	615.8	606.6
1997	616.7	620.6	625.3	628.0	631.7	640.2	643.8	647.9	649.0	654.3	657.7	662.1	639.8
1998	664.3	663.5	663.3	660.0	658.2	657.2	650.7	645.0	639.6	635.5	631.3	629.2	649.8
1999	624.8	624.1	625.1	626.1	627.8	632.2	631.7	630.9	630.9	633.4	637.2	641.7	630.5
2000	641.4	646.1	648.9	654.2	659.2	674.0	685.3	691.3	693.6	701.9	707.2	712.3	676.3
2001	714.5	712.8	703.8	686.2	669.7	652.5	631.9	615.8	603.9	593.6	583.3	576.7	645.4
2002	563.1	553.2	544.1	539.6	536.3	531.3	525.1	516.2	506.0	499.6	491.4	487.8	524.5
2003	479.9	475.1	472.0	468.1	464.2	462.3	457.7	455.8	450.9	447.8	448.8	450.2	461.1
2004	447.0	448.6	448.7	450.5	454.0	458.4	461.2	460.3	458.2	456.3	454.6	451.6	454.1
2005	448.6	449.3	449.7	449.7	450.7	455.1	454.8	455.1	453.6	452.2	452.1	453.1	452.0
2006	450.4	453.6	454.7	459.1	458.4	464.7	464.4	463.2	460.0	457.0	455.5	453.3	457.9
2007	455.4	452.4	449.8	448.3	448.4	452.8	450.7	446.2	442.1	440.2	441.3	442.3	447.5
2008	440.7	437.0	437.3	435.9	433.2	432.7	433.8	433.8	430.9	425.8	422.8	418.0	431.8
2009	407.7	399.7	394.4	386.1	379.4	374.6	370.6	367.8	365.4	362.6	364.7	364.7	378.1
2010	362.1	364.1	365.6	366.4	366.6	370.0	371.5	374.2	372.0	371.9	372.4	375.7	369.4
2011	376.5	377.8	381.2	381.1	381.1	383.5	385.8	388.2	387.0	386.6	386.1	385.6	383.4
2012	384.5	385.4	385.3	384.2	384.9	387.2	387.9	385.3	382.2	382.6	380.0	382.9	384.4



Employment in the DOT
 “Electronic Component
 Manufacturing” industry –
 NAICS 33441 fell below the
 BLS threshold of 15,000
 workers nationally, so it is
 now rolled up into NAICS
 3344 – Semiconductors and
 electronic components
 (manufacturing)

There are 6 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3133990001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Other miscellaneous durable goods manufacturing
 NAICS Code: 3399
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	398.3	400.8	402.0	401.5	403.2	404.2	396.3	405.4	408.3	409.3	404.5	396.4	402.5
1991	390.2	390.3	390.0	388.1	387.9	390.1	385.4	393.1	396.4	399.9	397.3	391.8	391.7
1992	385.6	386.5	388.4	391.4	393.5	397.0	393.5	397.2	401.3	404.2	404.4	398.3	395.1
1993	392.9	397.0	402.0	403.2	404.7	407.5	402.4	407.9	412.5	415.6	415.0	410.5	405.9
1994	407.3	408.9	413.0	415.0	415.8	417.9	415.2	421.6	424.1	428.5	428.0	422.0	418.1
1995	416.8	418.4	420.2	420.2	420.0	422.4	413.5	421.6	423.4	426.2	427.2	421.4	420.9
1996	414.4	416.8	417.2	416.3	417.2	419.7	411.2	418.8	419.7	423.1	422.3	418.8	418.0
1997	414.2	417.2	418.4	419.7	421.2	423.6	417.3	424.4	425.0	427.9	425.5	423.8	421.5
1998	419.9	423.7	425.3	428.0	426.9	428.8	424.3	426.3	429.1	427.2	424.7	421.6	425.5
1999	416.8	420.0	422.1	423.1	422.6	423.9	418.7	422.1	423.9	426.2	425.7	423.8	422.4
2000	420.1	423.3	423.4	420.9	422.9	425.4	421.5	425.4	422.1	424.5	424.8	422.0	423.0
2001	414.7	412.1	413.3	410.6	406.9	407.8	401.6	399.1	397.1	397.0	391.5	388.8	403.4
2002	382.3	380.1	379.3	379.8	380.6	381.8	377.9	381.0	381.5	379.7	382.4	377.4	380.3
2003	368.6	366.7	366.0	364.1	362.0	362.9	353.3	354.1	353.9	353.9	353.4	351.8	359.2
2004	348.6	351.2	351.3	355.5	356.4	359.0	355.4	354.8	352.4	354.9	356.8	355.3	354.3
2005	345.7	346.7	346.0	346.4	345.6	348.5	348.0	347.1	346.4	349.9	349.5	348.8	347.4
2006	340.0	342.3	342.2	342.6	339.6	338.9	333.7	338.9	340.3	342.2	345.6	342.6	340.7
2007	338.2	339.1	339.2	338.1	336.7	334.2	330.1	333.9	331.9	334.1	337.1	336.8	335.8
2008	328.9	327.2	325.0	322.6	318.7	318.3	312.6	315.5	313.7	315.2	311.8	305.2	317.9
2009	292.0	283.8	281.2	280.8	278.5	278.4	273.8	272.6	271.8	274.1	273.7	269.6	277.5
2010	263.7	262.9	260.9	262.3	263.0	263.2	263.5	263.5	264.0	266.6	267.6	268.2	264.1
2011	264.0	266.3	265.1	263.1	263.1	265.4	266.3	267.8	267.2	266.4	267.7	268.9	265.9
2012	267.0	267.2	267.1	267.2	268.0	269.1	268.4	269.9	269.1	269.3	268.7	269.0	268.3



Employment in the DOT
 “Fabrication, nec” industry is
 NAICS 3399– Other
 miscellaneous durable goods
 manufacturing

There are 9 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3132721201
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Flat glass and other pressed and blown glass and glassware
 NAICS Code: 327211,2
 Data Type: ALL EMPLOYEES, THOUSANDS



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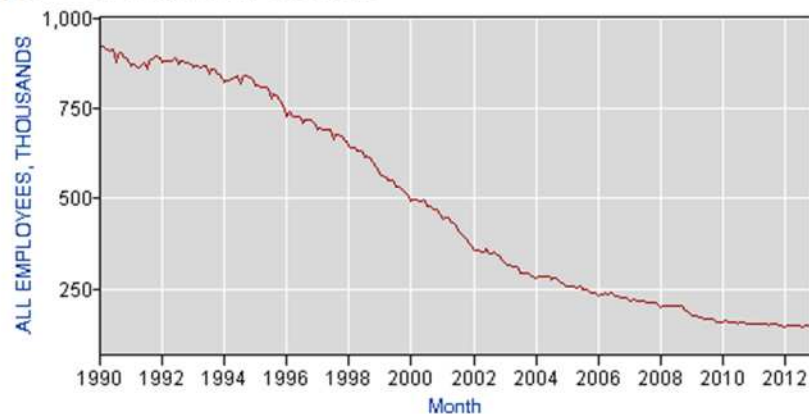
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	55.0	54.7	54.6	54.6	54.7	55.3	54.4	55.4	56.1	56.1	55.8	55.3	55.2
1991	54.8	54.7	54.7	54.5	53.6	52.9	52.9	55.1	55.7	55.5	55.0	53.9	54.4
1992	51.8	51.6	52.2	52.3	52.3	52.7	52.2	52.3	53.1	51.4	52.5	51.7	52.2
1993	50.8	51.3	51.3	50.7	51.2	51.5	51.5	51.8	52.8	53.0	52.5	52.3	51.7
1994	51.9	52.3	52.5	53.6	53.3	53.1	52.7	53.3	54.1	53.7	53.6	53.0	53.1
1995	52.6	53.3	52.8	53.0	53.2	53.2	52.4	53.4	54.0	54.3	54.0	54.2	53.4
1996	53.6	54.1	53.7	53.7	54.3	54.3	53.3	55.3	56.0	56.0	56.1	55.8	54.7
1997	56.3	56.7	56.1	56.4	56.3	56.1	56.1	57.4	58.3	58.2	58.3	58.2	57.0
1998	58.6	58.1	58.0	56.8	55.5	55.8	54.1	55.0	54.3	53.6	53.2	52.5	55.5
1999	52.2	51.2	50.8	51.4	51.9	52.2	52.0	52.8	52.9	53.7	53.6	53.3	52.3
2000	53.5	54.2	54.5	53.8	53.4	54.2	55.8	55.9	55.8	55.2	55.7	56.7	54.9
2001	56.2	56.0	55.2	55.2	54.7	53.8	53.4	53.6	53.1	51.9	50.9	50.8	53.7
2002	48.6	48.8	47.9	48.0	46.9	46.6	44.7	45.5	45.4	44.8	44.2	44.0	46.3
2003	42.5	42.3	42.1	41.2	40.6	40.3	40.0	39.9	39.6	39.3	38.8	39.7	40.5
2004	39.6	38.8	38.6	38.3	38.0	38.3	38.1	38.1	38.1	37.8	37.6	37.9	38.3
2005	37.4	37.4	37.3	37.3	37.3	37.2	36.9	37.2	36.9	37.0	37.0	37.1	37.2
2006	36.0	35.7	35.7	36.5	35.7	36.1	34.7	34.2	35.1	34.8	34.3	34.1	35.2
2007	34.5	34.4	34.1	33.4	33.6	33.2	33.2	33.5	33.3	32.9	33.0	32.6	33.5
2008	32.2	32.0	31.4	31.9	31.5	30.7	30.6	30.6	30.8	30.0	30.2	28.8	30.9
2009	27.9	27.4	27.3	27.3	27.5	26.7	26.7	26.5	26.3	26.5	26.2	26.3	26.9
2010	26.1	25.7	25.5	25.8	25.6	25.9	26.0	25.9	25.9	25.9	25.8	25.4	25.8
2011	25.3	25.4	24.8	24.7	24.9	25.5	25.4	24.9	25.1	25.3	25.0	25.1	25.1
2012	24.7	24.6	24.9	24.7	25.0	25.3	25.1	25.6	25.2	24.8	24.6	24.3	24.9



Employment in the DOT
 “Glass products” industry is
 NAICS 327211,2– Flat glass
 and other pressed and blown
 glass and glassware

There are 3 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3231500001
 Not Seasonally Adjusted
 Super Sector: Nondurable Goods
 Industry: Apparel
 NAICS Code: 315
 Data Type: ALL EMPLOYEES, THOUSANDS



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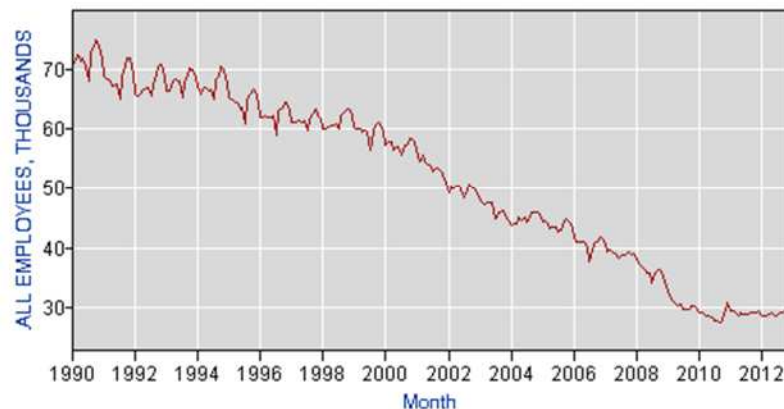
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	924.3	922.1	915.8	913.3	908.3	911.5	876.0	901.3	902.5	893.9	888.9	876.0	902.8
1991	866.9	871.2	869.8	863.6	869.1	878.6	857.6	881.0	886.5	892.2	896.3	890.0	876.9
1992	878.3	881.6	880.8	880.3	882.5	889.2	870.3	881.3	880.6	878.7	876.2	871.2	879.3
1993	862.2	867.9	867.8	864.2	867.4	869.7	843.4	858.7	857.0	851.3	846.5	831.4	857.3
1994	820.6	825.8	828.5	830.3	837.0	841.6	817.1	838.1	840.5	842.5	835.8	825.3	831.9
1995	811.4	812.6	809.7	808.6	807.5	805.5	776.4	790.1	785.3	773.1	764.7	748.2	791.1
1996	727.5	740.5	733.9	729.7	729.5	727.9	707.3	717.8	719.6	717.0	713.1	703.4	722.3
1997	691.2	695.4	692.4	690.2	690.7	690.1	664.5	679.7	677.3	673.1	666.2	659.2	680.8
1998	646.0	643.7	642.3	634.5	632.0	632.1	616.1	617.1	615.5	602.7	591.5	583.8	621.4
1999	571.4	563.5	560.0	553.4	551.5	549.7	531.1	534.8	527.3	521.8	516.4	504.9	540.5
2000	491.3	495.6	499.1	494.2	492.6	495.8	479.2	480.6	476.4	472.0	468.3	457.1	483.5
2001	444.3	445.5	446.6	437.2	431.6	429.3	413.0	401.2	397.3	388.1	379.2	368.7	415.2
2002	355.5	356.5	356.5	351.8	354.2	360.7	349.6	349.1	350.7	343.7	341.1	330.3	350.0
2003	320.0	317.7	318.0	311.3	312.1	312.1	295.4	295.0	294.2	294.3	290.1	286.2	303.9
2004	281.0	283.6	285.7	284.1	284.6	285.6	274.0	277.7	277.8	271.3	267.3	263.6	278.0
2005	257.0	259.5	258.1	257.0	254.6	255.5	248.5	248.6	247.6	240.7	240.6	237.7	250.5
2006	232.3	236.4	236.9	237.5	235.8	237.5	233.6	230.6	231.0	227.6	225.6	223.5	232.4
2007	216.4	218.2	218.9	218.0	217.2	217.3	214.5	213.3	213.7	209.8	210.2	207.3	214.6
2008	200.6	203.1	202.9	202.7	202.1	204.3	201.2	203.2	201.4	194.5	188.9	183.1	199.0
2009	174.8	176.0	174.0	170.0	170.2	166.7	165.8	167.2	165.6	161.7	158.1	159.4	167.5
2010	159.2	160.5	158.5	157.4	156.6	158.2	155.1	156.1	155.5	154.6	153.3	154.0	156.6
2011	151.6	152.3	151.4	152.7	152.7	153.0	149.7	152.0	153.5	152.5	150.7	148.5	151.7
2012	146.4	148.3	149.5	150.3	150.4	148.7	147.2	146.4	148.0	147.5	147.5	147.3	148.1



Employment in the DOT
 “Glove & Mitten”, “Hat &
 Cap”, and “Knitting”
 industries are
 NAICS 315 – Apparel

There are 7 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3133991001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Jewelry and silverware
 NAICS Code: 33991
 Data Type: ALL EMPLOYEES, THOUSANDS



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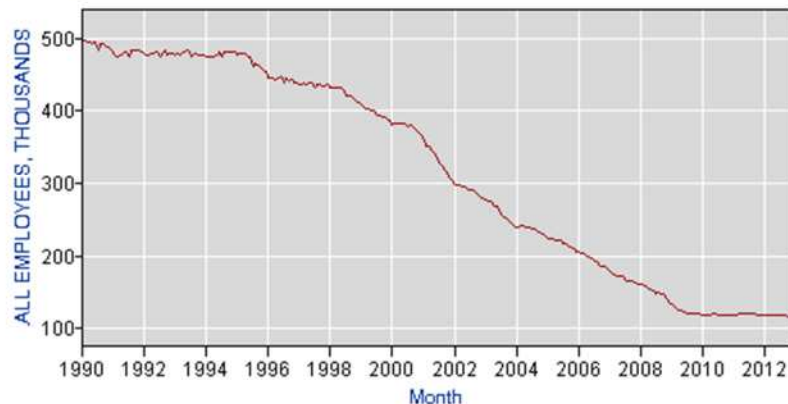
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	70.6	71.5	72.3	71.2	71.7	70.5	68.1	72.9	73.7	75.0	74.0	71.5	71.9
1991	68.8	68.3	68.2	67.2	67.2	67.4	64.9	68.8	70.4	71.9	71.7	69.2	68.7
1992	65.8	65.6	65.8	66.5	66.7	66.8	65.5	67.5	69.2	70.5	70.7	68.7	67.4
1993	66.2	66.4	67.5	68.2	67.9	65.2	68.0	68.8	70.3	70.0	68.4	67.9	67.9
1994	66.8	65.7	66.7	66.9	66.3	66.6	65.0	68.2	68.9	70.4	70.0	67.4	67.4
1995	65.2	64.9	64.6	64.5	63.4	63.5	60.8	64.9	65.9	66.6	66.2	64.1	64.6
1996	61.8	62.0	62.2	62.0	62.0	62.3	58.8	63.0	63.3	64.4	64.3	63.1	62.4
1997	61.0	61.2	61.2	61.4	61.2	61.4	59.6	61.7	62.5	63.2	62.3	61.7	61.5
1998	60.1	60.1	60.3	60.6	60.6	60.8	59.9	62.2	62.8	63.3	63.4	62.2	61.4
1999	60.3	60.0	60.1	59.5	59.6	59.3	56.5	59.6	60.6	61.0	60.4	59.7	59.7
2000	57.1	57.7	57.9	56.5	57.0	57.0	55.5	57.2	57.2	58.2	58.2	57.7	57.3
2001	55.3	54.4	55.5	54.6	54.0	53.8	52.9	53.4	53.4	52.9	52.2	50.8	53.6
2002	49.3	50.3	50.1	50.4	50.3	49.9	48.5	49.7	50.6	50.1	50.2	49.1	49.9
2003	47.8	47.7	47.4	47.6	47.7	47.7	44.8	45.8	45.8	46.2	45.5	44.6	46.5
2004	43.6	44.1	44.0	45.1	44.5	45.0	44.3	45.5	45.8	45.9	45.8	45.7	44.9
2005	44.4	44.6	43.9	43.3	43.4	43.4	42.6	42.9	43.9	44.8	44.2	43.9	43.8
2006	41.7	41.1	40.9	41.1	40.9	39.8	37.8	39.7	40.8	41.0	41.9	41.5	40.7
2007	40.3	39.2	39.5	39.3	39.0	38.1	38.4	38.9	38.7	39.4	38.7	39.1	39.1
2008	38.2	37.3	36.7	36.4	35.6	35.8	34.0	35.8	36.3	36.3	35.3	34.4	36.0
2009	32.7	31.2	31.0	30.5	30.3	30.5	29.8	29.6	29.7	30.2	30.2	30.0	30.5
2010	29.1	29.1	28.8	28.7	28.6	28.2	27.7	27.8	27.6	28.1	29.7	30.9	28.7
2011	29.4	29.5	29.0	28.6	29.0	28.9	28.8	28.8	29.1	29.0	29.2	29.5	29.1
2012	28.7	28.5	28.6	28.8	29.0	28.7	28.6	29.1	29.0	29.3	29.5	29.9	29.0



Employment in the DOT
 “Jewelry - Silverware”
 industry is
 NAICS 33991 – Jewelry and
 silverware

There are 7 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3231300001
 Not Seasonally Adjusted
 Super Sector: Nondurable Goods
 Industry: Textile mills
 NAICS Code: 313
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	500.1	497.1	494.3	494.9	491.9	494.4	482.7	492.4	492.6	490.1	487.3	483.4	491.8
1991	479.7	474.7	475.2	476.6	479.9	481.9	475.3	483.2	484.2	484.3	482.9	480.9	479.9
1992	478.0	477.7	477.4	479.4	479.8	481.9	475.2	479.9	482.7	477.5	479.3	479.3	479.0
1993	477.7	478.4	477.1	481.3	482.0	483.2	475.1	477.6	479.9	477.7	477.3	477.2	478.7
1994	474.3	474.1	474.1	475.5	476.6	480.4	473.3	480.6	480.3	480.6	481.3	480.3	477.6
1995	477.6	478.7	477.9	479.6	475.3	474.4	460.3	462.7	458.6	457.4	453.7	468.5	468.5
1996	446.0	446.4	444.7	442.8	446.1	447.1	438.8	444.4	441.9	442.2	439.5	438.5	443.2
1997	436.9	435.3	437.5	436.6	438.1	439.7	432.2	436.3	436.0	435.1	434.8	436.0	436.2
1998	432.7	431.9	431.1	432.1	430.9	429.9	420.3	420.0	421.8	416.9	414.6	412.3	424.5
1999	408.5	405.2	403.3	402.4	399.9	400.0	393.6	393.7	392.6	391.1	388.3	386.5	397.1
2000	380.5	382.5	382.8	382.3	381.7	382.8	377.8	380.3	377.4	373.4	370.7	366.6	378.2
2001	360.4	351.1	352.1	347.2	342.9	338.4	329.4	324.8	320.9	314.5	308.2	305.1	332.9
2002	298.2	297.2	297.0	295.9	294.8	294.2	290.7	290.5	288.6	283.6	281.7	278.8	290.9
2003	277.6	275.3	274.6	271.8	267.8	267.5	256.5	253.9	253.6	248.4	246.6	242.3	261.3
2004	240.4	238.4	241.2	240.7	240.3	240.1	236.7	236.4	235.9	233.3	231.2	228.5	236.9
2005	224.0	223.4	223.9	220.6	221.3	221.1	216.8	216.4	215.4	212.9	209.4	206.4	217.6
2006	205.6	204.3	202.9	201.2	200.2	197.6	193.8	192.5	188.1	186.3	184.8	183.2	195.0
2007	178.3	176.0	175.6	172.6	172.1	171.9	167.3	166.1	165.3	164.8	164.5	162.0	169.7
2008	160.5	160.1	158.7	155.5	155.2	152.6	148.7	150.1	148.8	146.7	141.1	136.4	151.2
2009	134.2	129.4	127.9	126.3	125.8	123.9	120.4	121.5	120.8	120.4	121.3	121.0	124.4
2010	117.8	119.0	118.9	119.1	119.9	120.3	119.2	118.7	118.6	118.9	119.0	119.0	119.0
2011	118.1	119.3	120.3	121.1	121.6	122.0	121.8	121.4	120.3	118.8	118.2	118.3	120.1
2012	118.6	118.3	118.8	118.5	118.7	118.8	118.1	117.8	118.6	116.6	117.3	115.3	118.0



Employment in the DOT
 “Narrow fabrics”, “Textile”,
 and “Textiles, other”
 industries are found in
 NAICS 313 – Textile Mills

There are 7 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3133910001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Medical equipment and supplies
 NAICS Code: 3391
 Data Type: ALL EMPLOYEES, THOUSANDS



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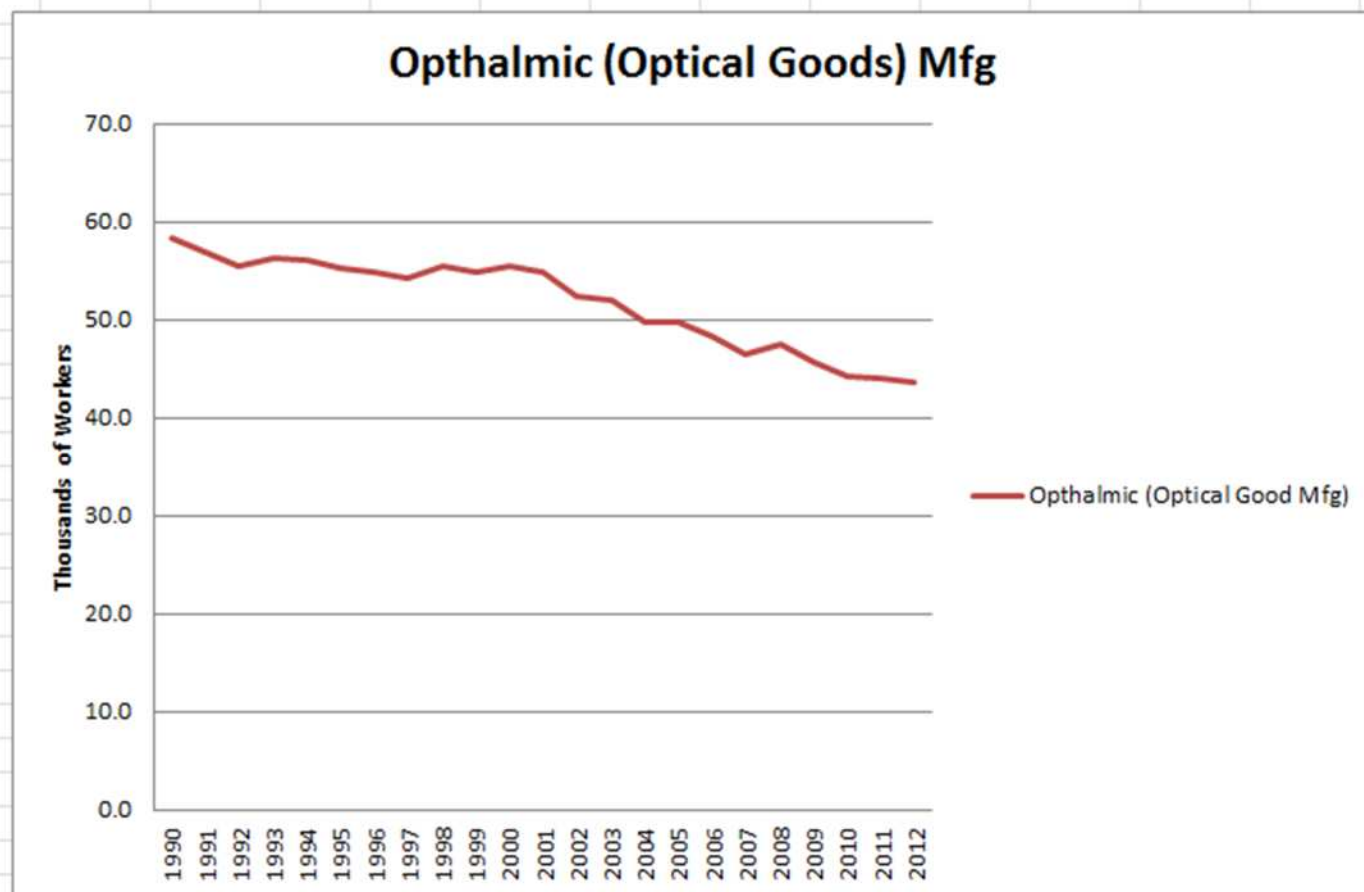
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	278.0	278.9	280.0	281.3	281.8	283.9	283.4	285.2	285.3	286.0	286.6	287.6	283.2
1991	285.7	287.7	288.9	289.6	290.0	290.8	290.4	291.9	291.3	291.7	291.2	291.7	290.1
1992	290.4	290.5	289.3	290.1	290.4	292.8	292.5	294.1	294.0	294.9	295.7	296.6	292.6
1993	296.7	297.5	298.2	297.8	297.3	297.7	296.8	296.9	295.7	295.6	294.4	293.8	296.5
1994	292.3	291.8	291.4	291.3	291.9	292.8	291.3	290.3	289.6	289.0	289.2	289.3	290.9
1995	287.1	287.5	287.2	287.2	287.4	289.4	288.8	290.4	290.3	290.4	289.7	289.9	288.8
1996	289.3	290.2	291.2	291.5	292.7	294.0	292.2	294.3	294.5	294.6	293.8	295.0	292.8
1997	294.4	295.2	295.2	295.1	295.6	297.5	296.9	298.0	297.3	297.6	298.6	299.3	296.7
1998	300.6	300.9	301.5	301.7	301.5	303.5	302.4	301.2	301.1	300.3	299.8	300.7	301.3
1999	300.1	300.1	300.3	300.3	302.5	303.2	303.1	302.1	301.2	301.7	301.3	303.1	301.6
2000	300.9	300.0	302.9	303.3	304.1	307.0	306.7	307.0	306.0	306.6	307.0	307.6	304.9
2001	308.3	308.2	307.1	306.5	306.9	308.3	306.9	305.7	304.8	303.8	303.5	303.2	306.1
2002	304.3	304.9	305.4	305.0	305.5	306.6	304.9	302.4	301.1	299.5	298.8	297.9	303.0
2003	298.7	298.1	299.2	299.2	298.8	301.4	301.1	300.0	298.9	298.9	298.2	296.8	299.1
2004	294.7	295.0	296.3	296.2	295.5	297.8	299.0	296.0	296.2	296.0	295.6	297.5	296.3
2005	298.7	299.6	298.0	298.5	299.8	302.8	303.6	302.5	299.7	296.7	298.4	300.0	299.9
2006	299.3	301.3	301.2	300.1	302.5	304.8	306.4	304.3	302.6	303.1	304.1	305.7	303.0
2007	302.8	304.0	303.7	305.5	305.2	307.0	308.5	305.8	307.2	306.1	306.5	308.4	305.9
2008	306.1	306.9	308.0	307.2	309.8	310.9	311.3	313.3	314.7	314.9	314.8	314.1	311.0
2009	310.3	310.9	309.6	310.2	308.6	308.0	306.1	305.9	304.7	303.0	301.8	303.0	306.8
2010	300.8	301.4	302.8	303.3	301.3	301.9	302.3	301.7	302.1	303.3	305.3	306.5	302.7
2011	305.5	305.6	304.8	308.1	308.5	311.3	309.3	309.7	308.0	308.3	306.5	307.0	307.7
2012	307.0	307.5	308.3	309.8	310.3	315.0	314.5	313.6	312.3	311.8	311.9	312.1	311.2



Employment in the DOT
 “Optical Goods” industry is
 NAICS 339115 – Ophthalmic
 Goods but BLS has rolled
 this up into 3391 – Medical
 equipment and supplies

There are 5 DOT occs. in this
 industry that are Sedentary
 Unskilled

1990	58.3
1991	56.8
1992	55.5
1993	56.3
1994	56.0
1995	55.2
1996	54.8
1997	54.2
1998	55.4
1999	54.9
2000	55.5
2001	54.8
2002	52.3
2003	52.0
2004	49.8
2005	49.8
2006	48.2
2007	46.5
2008	47.4
2009	45.7
2010	44.2
2011	44.1
2012	43.7



Subtraction of Surgical and Medical Instruments, Surgical Appliances, and Dental Labs from its roll-up group shows a different picture for the one remaining industry – 339115 - Opthalmic Goods. There are 5 DOT occupations in this industry that are Sedentary Unskilled.

Series Id: CEU3133299401
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Small arms, ammunition, and other ordnance and accessories
 NAICS Code: 332992,3,4
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	77.9	77.8	78.0	77.6	76.3	75.0	74.5	73.9	73.9	73.5	73.1	73.2	75.4
1991	72.7	69.3	71.9	71.1	69.9	69.7	69.8	69.6	69.5	70.0	69.6	69.7	70.2
1992	68.9	68.1	67.8	66.8	67.0	66.5	65.5	65.1	65.2	63.9	63.7	63.8	66.0
1993	63.1	62.5	61.7	60.9	60.2	59.7	58.7	57.5	57.7	57.0	56.3	56.2	59.3
1994	55.4	55.1	55.2	55.0	54.5	54.3	53.8	53.2	53.0	53.2	53.2	53.1	54.1
1995	52.6	52.5	52.5	52.0	51.3	51.4	50.9	50.7	50.3	50.2	49.9	49.8	51.2
1996	49.7	49.3	49.0	48.4	48.4	48.3	47.5	47.9	47.8	46.9	46.8	45.7	48.0
1997	45.8	45.1	44.6	44.1	43.4	43.6	43.3	43.4	43.5	43.2	42.9	42.9	43.8
1998	42.5	42.5	42.6	42.6	42.4	42.4	41.9	42.2	42.3	42.3	42.1	42.1	42.3
1999	42.1	42.1	41.7	42.1	41.8	41.9	41.3	41.3	41.1	41.4	41.0	41.3	41.6
2000	40.2	39.4	39.5	39.0	39.1	39.1	38.2	38.6	38.4	38.1	38.2	37.5	38.8
2001	37.4	38.8	38.8	39.2	39.2	39.9	39.4	39.2	39.2	39.5	39.7	39.5	39.2
2002	39.2	39.1	39.3	39.3	39.0	39.4	39.7	39.8	39.8	39.9	39.8	39.9	39.5
2003	39.6	39.6	39.6	39.8	39.2	39.7	39.1	39.0	39.0	39.2	39.0	39.9	39.4
2004	39.7	39.4	39.6	40.1	40.4	40.7	41.1	40.9	41.0	41.4	41.6	41.8	40.6
2005	41.3	41.6	41.7	41.8	41.9	42.0	42.3	42.3	42.0	42.2	41.9	41.9	41.9
2006	42.0	42.0	41.9	41.7	41.7	41.9	41.8	41.8	41.8	42.1	42.1	42.3	41.9
2007	42.4	42.7	42.3	42.2	42.1	41.9	41.7	41.7	41.6	41.7	42.1	42.2	42.1
2008	41.8	42.0	41.6	41.7	42.1	42.2	42.7	42.1	42.4	42.4	42.4	42.3	42.1
2009	41.8	42.0	42.4	42.6	42.6	42.9	43.0	42.7	42.3	42.3	42.4	42.5	42.5
2010	42.3	42.0	42.1	42.3	42.5	42.5	42.7	42.5	42.5	42.3	41.7	41.7	42.3
2011	41.3	40.8	41.1	41.0	41.0	40.8	41.6	41.5	41.4	41.3	41.3	40.6	41.1
2012	40.4	41.1	42.0	41.9	42.6	42.8	42.4	42.9	43.2	43.5	43.9	43.5	42.5

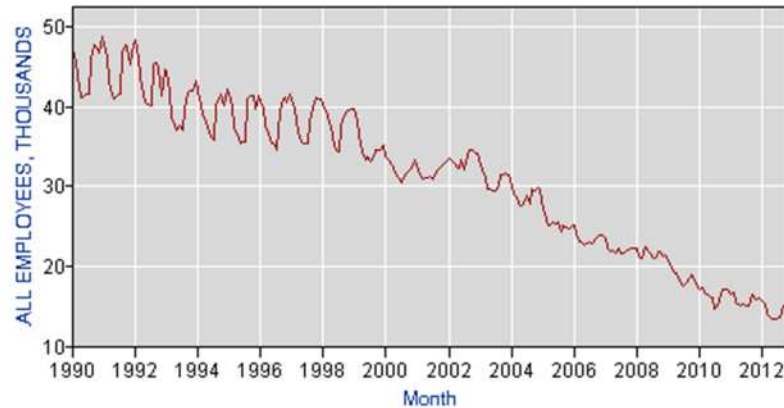


Employment in the DOT
 “Ordnance” industry is
 NAICS 332994 – Small arms,
 ammunition, and other
 ordnance and accessories

There are 4 DOT occs. in this
 industry that are Sedentary
 Unskilled

Note: Domestic/sport
 demand for ammo is less
 due to higher cost and
 indefinite shelf life. About
 80% of ammo is produced in
 the US; 20% foreign source.
 The US Govt. owns its own
 ammo manufacturing
 facilities, but they are often
 managed by the private
 sector.

Series Id: CEU3232920001
 Not Seasonally Adjusted
 Super Sector: Nondurable Goods
 Industry: Tobacco and tobacco products
 NAICS Code: 3122
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	47.2	45.8	43.8	41.2	41.2	41.7	41.7	46.2	47.8	47.5	46.7	48.9	45.0
1991	47.8	46.3	43.0	41.4	41.0	41.4	41.6	46.7	47.8	47.3	45.4	48.0	44.8
1992	48.3	46.1	43.6	41.5	40.5	40.3	40.2	45.2	45.6	44.9	41.3	44.6	43.5
1993	44.2	41.8	38.6	37.7	37.0	37.6	37.0	39.8	41.8	42.0	42.0	43.3	40.2
1994	42.1	40.2	39.0	38.1	36.9	36.3	35.8	40.4	41.2	41.7	40.1	42.2	39.5
1995	41.7	40.1	37.2	36.6	35.4	35.7	35.7	41.0	41.4	41.3	39.7	41.3	38.9
1996	40.5	40.0	37.5	36.6	35.4	35.4	34.5	37.5	40.5	41.1	40.6	41.6	38.4
1997	40.9	39.8	38.1	36.1	35.4	35.4	35.5	38.1	40.0	41.1	41.0	40.9	38.5
1998	40.1	39.6	38.2	37.4	35.2	34.6	34.3	37.7	39.0	39.6	39.5	39.8	37.9
1999	39.8	38.2	35.3	34.3	33.3	33.7	33.2	33.7	34.5	34.5	34.7	35.3	35.0
2000	33.8	33.4	32.7	32.4	31.3	31.2	30.4	31.6	31.8	32.2	32.5	33.4	32.2
2001	32.2	31.6	30.9	31.2	31.0	31.3	30.9	32.0	32.2	32.5	32.8	33.1	31.8
2002	33.5	33.3	32.9	32.5	32.3	33.3	32.2	34.0	34.6	34.6	34.4	34.1	33.5
2003	32.5	32.1	31.1	29.7	29.7	29.5	29.4	30.3	31.5	31.6	31.7	31.5	30.9
2004	29.8	29.1	28.7	27.9	27.5	28.2	28.9	27.9	29.7	29.5	29.9	29.4	28.9
2005	27.0	26.6	25.2	25.2	25.6	25.4	25.5	24.4	25.2	24.9	24.8	24.9	25.4
2006	25.2	23.9	23.1	23.1	22.7	22.9	23.0	22.9	23.2	23.6	23.9	23.9	23.5
2007	23.5	22.3	21.8	22.0	21.7	22.2	21.6	21.7	21.9	22.0	22.2	22.3	22.1
2008	22.2	21.3	21.1	22.4	22.1	21.7	21.2	21.1	21.8	21.9	21.2	21.4	21.6
2009	20.6	20.0	19.3	19.2	18.5	17.8	17.6	17.9	18.5	19.0	18.3	17.7	18.7
2010	17.1	17.3	16.6	16.5	16.3	16.0	14.7	15.1	16.4	17.2	17.2	17.1	16.5
2011	16.5	16.6	15.4	15.2	15.0	15.3	15.0	15.1	16.4	16.0	15.9	16.1	15.7
2012	15.7	15.2	14.1	13.7	13.5	13.5	13.5	13.7	15.1	15.1	15.1	15.0	14.4



Employment in the DOT
 “Tobacco” industry is
 NAICS 3122 –
 Tobacco and tobacco
 products

There are 4 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3133992001
 Not Seasonally Adjusted
 Super Sector: Durable Goods
 Industry: Sporting and athletic goods
 NAICS Code: 33992
 Data Type: ALL EMPLOYEES, THOUSANDS



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	58.2	58.7	59.2	59.5	59.8	59.8	58.3	58.8	58.9	59.6	59.9	58.8	59.1
1991	58.6	58.5	58.9	58.5	58.7	59.5	59.5	59.3	60.1	60.4	60.9	60.9	59.5
1992	60.7	61.2	62.1	62.3	63.5	63.7	63.1	61.5	63.4	63.6	63.9	63.3	62.7
1993	63.5	64.5	65.6	65.4	65.8	65.9	64.8	63.1	64.8	64.8	65.5	65.9	65.0
1994	66.2	67.2	68.3	68.7	69.3	69.2	70.0	69.9	70.1	71.6	72.6	72.6	69.6
1995	73.3	74.0	74.4	74.3	74.2	73.8	71.4	69.9	70.9	72.2	73.8	73.4	73.0
1996	71.8	72.9	72.4	71.5	70.8	70.5	69.0	68.5	69.0	70.0	69.7	70.6	70.6
1997	70.8	71.2	72.2	72.4	72.2	70.9	70.1	70.1	69.4	70.7	70.1	70.8	70.9
1998	70.9	72.2	72.5	73.7	72.3	72.0	69.9	67.2	67.8	66.8	67.0	66.7	69.9
1999	66.5	67.6	68.6	69.5	69.1	69.1	68.7	67.9	67.3	67.2	67.0	67.4	68.0
2000	68.7	69.7	70.4	71.1	71.0	69.7	69.2	69.0	67.7	67.1	67.2	66.3	68.9
2001	66.0	66.8	67.6	67.5	68.1	68.9	68.3	67.3	66.1	66.1	65.0	64.8	66.9
2002	63.6	64.2	64.0	64.1	64.4	65.1	63.7	63.2	62.5	61.8	62.5	62.8	63.5
2003	62.6	61.2	61.5	60.7	60.1	59.8	57.8	57.4	56.7	57.1	57.5	57.9	59.2
2004	58.4	58.2	58.0	59.7	59.0	58.1	57.2	56.6	53.9	53.1	54.0	53.6	56.7
2005	53.0	53.1	53.7	54.2	55.2	54.9	54.2	53.4	52.3	51.5	52.1	52.9	53.4
2006	52.4	53.0	53.7	53.4	52.7	53.3	52.6	52.4	52.0	51.4	51.0	52.1	52.5
2007	51.7	52.7	52.5	52.2	51.3	51.8	50.5	51.0	50.2	50.2	50.7	51.8	51.4
2008	51.0	51.3	50.3	49.7	49.5	49.8	49.5	48.5	47.7	48.5	47.7	46.1	49.1
2009	45.1	44.5	43.9	44.1	43.7	44.6	44.2	43.7	41.7	41.7	41.8	41.9	43.4
2010	42.0	41.8	41.4	41.5	41.2	42.8	41.5	41.7	41.5	41.1	41.4	42.1	41.7
2011	41.8	42.2	41.6	41.3	41.8	42.0	41.6	41.7	40.5	40.0	39.8	40.4	41.2
2012	40.8	40.8	41.3	41.6	41.7	42.4	41.5	41.3	40.9	40.7	40.4	40.7	41.2



Employment in the DOT “Toy-
 sport equipment” industry is
 NAICS 33992 –
 Sporting and athletic goods

There are 3 DOT occs. in this
 industry that are Sedentary
 Unskilled

Series Id: CEU3000000001
 Not Seasonally Adjusted
 Super Sector: Manufacturing
 Industry: Manufacturing
 NAICS Code: -
 Data Type: ALL EMPLOYEES, THOUSANDS



Overall decline of employment in the manufacturing sector workforce was 32.4% from 1990 to 2012

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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1990	17649	17727	17723	17734	17748	17870	17691	17803	17786	17694	17501	17413	17695
1991	17184	17053	17001	16987	17037	17134	17001	17175	17178	17110	17027	16932	17068
1992	16703	16679	16677	16733	16795	16917	16813	16905	16914	16845	16822	16781	16799
1993	16661	16671	16681	16684	16733	16834	16726	16853	16891	16869	16856	16824	16774
1994	16722	16744	16799	16855	16932	17103	16991	17183	17222	17226	17238	17230	17020
1995	17133	17158	17177	17206	17234	17342	17177	17335	17341	17290	17248	17251	17241
1996	17083	17130	17113	17137	17210	17323	17181	17362	17348	17333	17312	17308	17237
1997	17183	17223	17268	17288	17356	17485	17352	17553	17550	17563	17597	17613	17419
1998	17511	17536	17569	17580	17607	17709	17404	17640	17632	17551	17502	17475	17560
1999	17324	17305	17303	17291	17316	17394	17303	17363	17334	17313	17317	17299	17322
2000	17179	17192	17236	17249	17262	17403	17318	17365	17278	17251	17226	17200	17263
2001	16993	16933	16869	16750	16646	16615	16393	16332	16186	16010	15847	15723	16441
2002	15475	15414	15375	15341	15335	15399	15274	15272	15194	15096	15009	14919	15259
2003	14744	14674	14654	14563	14556	14593	14432	14467	14419	14368	14339	14304	14509
2004	14171	14172	14220	14267	14337	14434	14370	14431	14385	14360	14331	14306	14315
2005	14142	14168	14200	14203	14246	14323	14250	14288	14234	14224	14218	14222	14227
2006	14093	14104	14141	14172	14187	14303	14215	14246	14192	14114	14060	14036	14155
2007	13898	13886	13887	13875	13901	13987	13919	13927	13886	13812	13795	13776	13879
2008	13619	13578	13559	13516	13530	13580	13472	13459	13376	13214	13085	12883	13406
2009	12450	12266	12112	11957	11829	11791	11704	11722	11685	11607	11550	11494	11847
2010	11357	11340	11367	11425	11499	11613	11614	11651	11638	11619	11610	11604	11528
2011	11524	11542	11588	11640	11690	11801	11813	11863	11840	11826	11790	11800	11726
2012	11735	11751	11822	11850	11907	12016	12029	12048	12008	11980	11939	11939	11919

Only 14 of the 137 DOT occupations (10%) are found in non-manufacturing industries.



Industry Context for DOT Industries

DOT Industry	N DOTs	NAICS	N 1990	N 2012	N Change	Percent
Boot & Shoe; Leather Products	7	3162	134.8	29.0	-105.8	-78.5%
Button & Notion	15	339993	217.6	135.0	-82.6	-38.0%
Clock & Watch	21	334518	160.3	107.9	-52.4	-32.7%
Electronic Component	6	33441	584.3	382.9	-201.4	-34.5%
Fabrication, nec	9	3399	398.3	269.0	-129.3	-32.5%
Glass Products	3	332711,2	55.0	24.3	-30.7	-55.8%
Glove & Mitten; Hat & Cap	3	3152	924.3	147.3	-777.0	-84.1%
Jewelry & Silverware	7	33991	70.6	29.9	-40.7	-57.6%
Narrow Fabrics; Textile; Textile Products	7	313	500.1	115.3	-384.8	-76.9%
Optical Goods	5	339115	58.3	43.7	-14.6	-25.0%
Ordnance	4	332994	77.9	43.5	-34.4	-44.2%
Tobacco	4	3122	47.2	15.0	-32.2	-68.2%
Dolls, Toys, Games	3	33993	58.2	40.7	-17.5	-30.1%
TOTAL (employment # in thousands)	94		3,287	1,384	-1,903	-57.9%
All Manufacturing Sectors (in thousands)		31-33	17,649	11,939	-5,710	-32.4%

94/137 = 68.6% of the Sedentary Unskilled DOT occupations are found in these 17 DOT industry groups

These 17 industry groups map to 13 NAICS groups

Overall 57.9% reduction of the overall workforce in these 13 NAICS groups - 1,903,000 workers overall in the last 22 years

The remaining 43 DOT occupations are spread across 27 other DOT industries

These 13 NAICS groups total 33.3% of all employment losses in the mfg sector in the last 22 years

The overall rate of decline for industries where sedentary unskilled occupations are found is

nearly twice the rate for the entire manufacturing sector

Sedentary – Unskilled DOT Occs. Simple Math vs. Industry Context

- SkillTRAN Industry Context method estimates less than 200,000 employed (and shrinking)
- Simple Math estimates about 700,000
- Simple Math overestimates the employment of Sedentary Unskilled Occupations by about 350%

Impact

- SSA
 - More standardized methodology for VEs
 - Numbers better reflect current economy
 - Continuously peer-reviewed process
- Other Rehab & Litigated Venues (Work Comp)
- Lost access to labor market

Lines of Questioning re: Vocational Testimony

- What data source(s) are being used for employment numbers (CENSUS, OES, ?)
- Are these estimates or actual numbers?
- Are the numbers quoted for the DOT cited or for an occupational group?
- Have the numbers been reduced in some way from the group numbers? How?
- Is this a commonly followed practice?
- Is this method an accurate reflection of the labor market?

Lines of Questioning re: Vocational Testimony

- What is the percentage of reported employment in each relevant industry?
- Are there other DOT occupations in this OES/CENSUS group in this industry? If yes, how many? How does that impact the estimate? Could this hypothetical person perform all of those other DOT occupations in that OES/CENSUS industry group?
- How does the ALJ define “significant number” ?
- How does the ALJ define a “region”?

Lines of Questioning re: Vocational Testimony

- If simple math is the method, ask if it is reasonable to assume that all of the DOT occupations in each occupational group occur with exactly the same frequency.
- Full-time &/or part-time numbers quoted?
- If VE is using the industry context method, ask for examples of the industries in which the cited DOT occupation is likely found.

Current Development

- ✓ Review all unskilled occupations
- ✓ Study occupations with no/low frequency
- ✓ Identify obsolete occupations
- ✓ Confirm industry suggestions for all DOTs
- Weed out inappropriate suggestions
- Build staffing pattern for NAICS without one
- ✓ Assure employment approaches 100% for OES groups with only one DOT
- Identify potential industry gaps
- Deploy mechanisms to archive, harvest, and process peer-reviewed industry/distribution changes
- Add Industry Adjustment Factor to account for industry employment of parent NAICS

Future Evolution

- Examine suggestions sent via peer review
- Conduct LMS to confirm the estimates
- Confirm no / low frequency DOTs
- Establish minimum company size likely needed for employment to be found for a DOT
- Establish method to properly distribute high frequency occupations
- Calculate Lost Earning Capacity using this peer-reviewed foundation

Determining Existence of Occupations

1. Review available LMI for specific occupations. This may include some industry suggestions.
2. Determine which industries might hire for the occupation(s) in question.
3. Identify businesses in those industries within the client's personal Labor Market Area.
4. Do a Labor Market Sampling.

Labor Market Sampling

- Establishes existence / frequency of jobs
- Clarifies complex disability/cultural issues
- Can validate hiring history / future hiring / turnover rate for that occupation
- Can establish starting / average wages
- Adequate random sampling can be extrapolated to reasonably estimate industry employment in a given labor market area
- Builds a more reliable, defensible foundation upon which to develop an opinion or plan

County Business Patterns

- Counts of business by NAICS – 6 digits
- Gathered from income tax data, excluding: the self-employed, farm workers, government workers, railroad workers
- Not a sample – this is all firms with employees
- Breakouts by size classes (N employees)
- Available for US, County, MSA, Zip Code
- Two year lag time in availability (mid-year)
- www.census.gov/econ/cbp/index.html

Common Resources for LMS

Local ○ Chamber of Commerce (Directory & Web)

○ City / County web sites

○ City Directory

Statewide ○ Haynes & Statewide Manufacturer Directories

○ State Employment Offices (SESA) & Web sites

○ County Business Patterns

Commercial ○ Yellow Pages

○ Commercial Data Resources

Professional ○ LMI Statistician in local SESA

○ Professional and Trade Associations / Unions

○ LMS Banks (previously surveyed occupations)

○ Private Employment Agencies / Recruiters

○ Professional Associates

○ Experts within a specific industry / occupational group

Current ○ Job Fairs / School Placement Offices

Openings ○ Classified Ads & Job Boards (Current Job Openings)

SkillTRAN Software: **Similarities** Job Browser *Pro* & OccuBrowse

- Entire DOT (1991 + 1998)
- Alternate Titles (Military and Civilian)
- All worker characteristics (not “selected”)
- Complete descriptions
- All associated cross-reference codes
- Labor Market Information: Long Term Outlook (OB+), Employment Numbers, Wages
- Context-sensitive Help topics
- Clipboard to word processing (Copy & Paste)
- Links to external web sites

SkillTRAN Software: Differences Job Browser Pro vs. OccuBrowse

- Outlook Interpolation
- Extensive Help File
- RIASEC Search
- Top Jobs

- Tabbed Interface
- NAICS Search
- Worker Trait Search for Hypotheticals
- Compare 2 Occs
- State/Local Outlook
- Schools
- Task formats for JA
- List Re-configuration

Thank You

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