



# ***SkillTRAN* Software + Employment Numbers: Why such variation?**

**SSA Administrative Law Judge Training – Boston Region**

**December 9, 2015**

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President – *SkillTRAN* LLC**

**[www.skilltran.com](http://www.skilltran.com)**

## Objectives

- **Company Background**
- **Common Public Sources of Occupational and Labor Market Data**
- **Job Browser *Pro* vs. OccuBrowse vs. OASYS software**
- **Current Methods to Estimate Employment**
- **SkillTRAN Industry Context Method & Examples**
- **Industry Changes & Complete SOC Example**
- **Sedentary Unskilled Occupations**
- **Questions for Vocational Experts**
- **An Expert's Perspective – Amy Vercillo, Ph.D.**
- **SkillTRAN Software – Web-Based OccuBrowse**

# History

- Jeff Truthan – MS - Rehabilitation Counseling – 1975
- 9 years as a state vocational counselor/vocational evaluator
- 30 years in software design & documentation focused on the DOT, Skills Transferability, and Labor Markets
- Online services since 1982; PC software since 1985 integrating the DOT with many labor market resources
- Acquired VERTEK (OccuBrowse/OASYS) in 2010
- President of SkillTRAN LLC – Spokane, WA  
7 employees – Sales, Support, Development

## Markets Served

- More than 4,900 customers in all 50 states
- Public and private rehabilitation providers
- Vocational Experts
- Claimant Representatives
- Long Term Disability Insurers
- Work Force Development
- Education
- Military to Civilian Transition
- Social Security Administration  
Accepted as a suitable electronic version of the DOT.  
Software currently deployed in SSA's Digital Library.  
OccuBrowse on 19,000 SSA desktops (including DDS).
- Web-based OccuBrowse – Deployment in SSA soon

## Leadership / Longevity

- Frequent presentations at conferences & webinars with customers
- Since 2001, endorsed by IARP as *"high quality, reasonably priced, and beneficial to IARP members"*
- Frequent contributor to IARP SSA VE List Serve topics
- Attentive to IARP list server for alternate titles
- Author of recent book chapter about Career Development
- ABVE "Lifetime Achievement Award" – 2013
- Founding member of Special [IARP] Task Force to study existence of Sedentary/Unskilled Occupations
- Track and comment re: SSA-BLS-NCS effort to build a new OIS for disability adjudication
- Detailed documentation – [www.skilltran.com](http://www.skilltran.com)

## Tools available within SSA

- **OccuBrowse** – deployed on all desktops for FY2015
- **OccuBrowse** will be web-based in FY2016
- **OASYS** – available in the digital library
- **Job Browser Pro** – digital library
- ***3 of the top 5 most used apps in SSA***

## Supporting Materials

- Full Slides – Contact Tony McDonald
- Pocket Guide to the DOT (Paper & PDF)
- Technical Discussion of Industry Context Methodology – Available at:  
[http://www.skilltran.com/DOTempnum\\_method.pdf](http://www.skilltran.com/DOTempnum_method.pdf)
- Additional Handouts – from Tony
  - List of all Sedentary Unskilled Occupations
  - List of all SOC groups with 1 DOT code
  - Occupational Density of all Packers-Hand Packagers – SOC 53-7064

## 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

## Relevant Data Sources

### 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](http://www.census.gov)
- American Fact Finder – [factfinder.census.gov](http://factfinder.census.gov)
- American Community Survey - [www.census.gov/acs](http://www.census.gov/acs)  
(ongoing survey of about 1% of population – 3 million/year)

## 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](http://www.bls.gov/cps)

## OES – Occupational Employment Survey

- 840 SOC (= 841 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](http://www.bls.gov/oes)

# Industry Classifications

## 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](http://www.bls.gov/bls/naics.htm)

## 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.]

## Input-Output Matrix

- Built using OES, CPS, and CES data
- Constructed for long-term occ. Projections
- Covers 300+ NAICS industries and 700+ occupations
- Considers: Labor Force, aggregate economy, final demand (GDP), industry output, employment by industry, employment by occupation
- [www.bls.gov/emp/empind3.htm](http://www.bls.gov/emp/empind3.htm)

## 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](http://www.bls.gov/emp/home.htm)



## JOLTS – Job Openings and Labor Turnover Survey

- Job Openings, Hires, and Separations
- Overall openings by NAICS supersector and select NAICS sectors and by region
- Employment, job openings, hires, quits, layoffs and discharges, and other separations
- Number of unfilled jobs
- Gross employment – not by occupation group
- Sample size: 16,000 establishments
- [www.bls.gov/jlt](http://www.bls.gov/jlt)

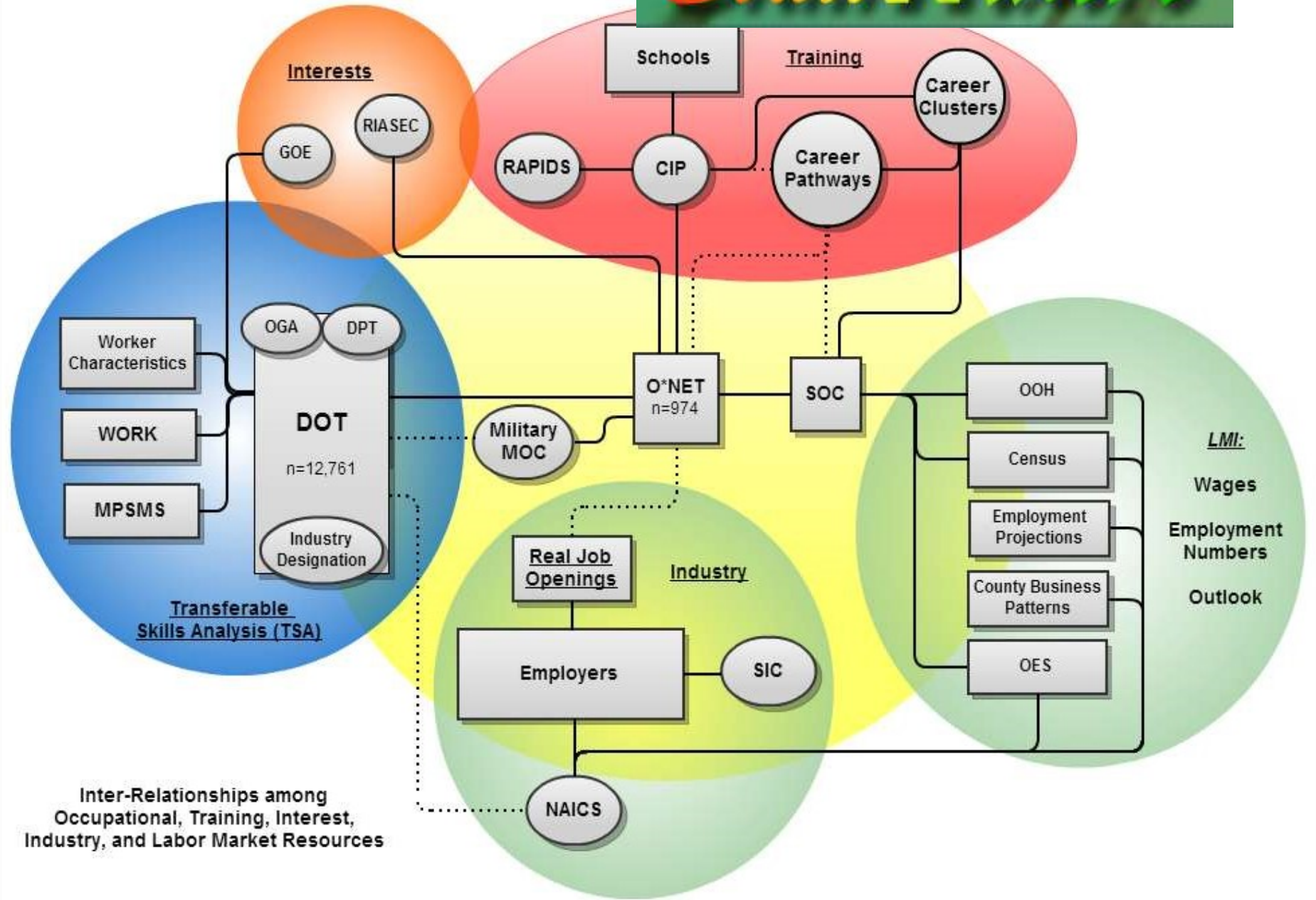
## NCS – National Compensation Survey

- 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](http://www.bls.gov/NCS)
- Now focusing on data collection for physical and environmental demand and mental/cognitive elements by SOC/O\*NET code
  - <http://bls.gov/ors/>
  - SkillTRAN Comments: [www.skilltran.com](http://www.skilltran.com) > Customers > Industry News

## State Labor Market Information Sources

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

# SkillTRAIN



Inter-Relationships among Occupational, Training, Interest, Industry, and Labor Market Resources

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

- Entire DOT (1991 + 1998)
- Alternate Titles (Military and Civilian)
- Brief Descriptions
- All worker characteristics (not “selected”)
- Complete descriptions
- All associated cross-reference codes
- Labor Market Information: Long Term Outlook, 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

- Skills & Competencies
- Estimated DOT Employment Numbers
- Bluebook Citations
- Outlook Interpolation
- Extensive Help File
- RIASEC Search
- Top Jobs

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

## OASYS Software

- All OccuBrowse features
- Long Term Projections
- Schools Information for Training Programs
- Employer Database
- Transferable Skills Analysis – Multiple Levels
- Pre-Injury/Post-Injury Analysis
- Client-Job Bank (Job Match Version)

## 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 (n=2,906)  
have 15 or less DOT  
codes in 687  
SOC/OES Groups

## Data

### Aggravation

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

SOC 2010 GROUPS				
N SOC Groups	N DOTs / SOC Group	DOTs Covered	%	Accum
143	1	143	1.1%	1.1%
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%

## Employment Number Estimates

- Quote the SOC / OES Group Number
- Assume equal distribution across all DOTs
- Use proportionate distribution

## 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

## 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

## 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
	<b>N = 19</b>	<b>N = 18</b>

## 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](http://www.uspublishing.net) [Is a private company]

## U.S. Publishing – Occupational Employment Quarterly II

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

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

Per OEQII sample page posted at [www.uspublishing.net](http://www.uspublishing.net) for Third Quarter 2007

## Erroneous Example

OES 43-5111 – Weighers, Measurers, Checkers, and Samplers, Recordkeeping

This OES Group has 33 DOT Occupations

The Boston MSA has 930 jobs in this OES/SOC Group (5/2014).

**“Therefore, there are:”**

Sedentary	1	3%	28
Light	23	70%	648
Medium	8	24%	226
Heavy	1	3%	28
Very Heavy	0	0%	0
	<hr/>		<hr/>
	33		930



## 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 (North American Industry Classification System – NAICS)
- 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 (staffing pattern)
- 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 may 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

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.

Show All DOTs in this OES Group

# Employed 2008	2015	% Occ. Density	# Employed 2018	% Change	# Change	NAICS	NAICS Industry where employed
3,549,960	3,637,803	100.000	3,675,450	3.53	125,490	TOT001	Total employment, all workers
3,507,960	3,594,354	98.803	3,631,380	3.51	123,430	WSE100	Total wage and salary employment
3,507,010	3,593,446	98.776	3,630,490	3.52	123,470	WSE110	Wage and salary employment, except agricu
2,918,210	2,984,115	82.025	3,012,360	3.22	94,150	440000-450	Retail trade
967,360	962,936	26.470	961,040	-0.65	-6,320	445000	Food and beverage stores
850,050	851,107	23.394	851,560	0.17	1,510	445100	Grocery stores
569,450	660,177	18.119	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>

Help

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Long Term Occupational Outlook

211.462-010 CASHIER II

**OUTLOOK INFORMATION**

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**U.S. National Long Term Employment Outlook**

Related DES Statistical Group: 41-2011 Cashiers, except gaming

This DES statistical group has 18 specialty occupations (unique DOT occupations)

All employment projections are for the entire DES Statistical Group, NOT an individual DOT occupation.

Show All DOT's in this DES Group

# Employed 2008	2015	% Occ. Density	# Employed 2018	% Change	# Change	NAICS	NAICS Industry where employed
546,390	519,713	14.291	508,280	-6.97	-38,110	447100	Gasoline stations
344,190	443,611	12.161	486,220	41.26	142,030	452900	Other general merchandise stores
273,950	273,579	7.514	273,420	-0.19	-530	720000	Accommodation and food services
257,090	255,984	7.037	255,510	-0.61	-1,590	722000	Food services and drinking places
229,090	243,111	6.674	249,120	8.74	20,020	446000	Health and personal care stores
229,090	243,111	6.674	249,120	8.74	20,020	446100	Health and personal care stores
<b>225,260</b>	216,566	5.955	212,840	-5.51	-12,420	452100	Department stores

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

Help

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Long Term Occupational Outlook



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

## Occupational Employment Survey (OES) - Employment Data - May 2014

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: Massachusetts

Region: Boston-Cambridge-Quincy, MA-NH

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 2014 - U.S. NATIONAL Occupational Employment Survey (OES): National Data

Estimated total National employment in this OES group = 3,398,330 ± 13,593 CI\*

### May 2014 - STATEWIDE Occupational Employment Survey (OES): Massachusetts

Estimated total Statewide employment in this OES group = 68,350 ± 2,051 CI\*

### May 2014 - REGIONAL (Metropolitan / Non-Metro / Rural) Occupational Employment Survey (OES): Boston-Cambridge-Quincy, MA-NH

Estimated total Regional employment in this OES group = 51,750 ± 1,915 CI\*

Region: Abington town, Acton town, MA, Amesbury town, MA, Amherst town, NH, Andover town, MA, Arlington town, MA, Ashland town, Atkinson town, NH, Avon town, Ayer town, MA, Bedford town, MA, Belmont town, MA, Berkley town, MA, Berlin town, Beverly city, MA, Billerica town, MA, Bolton town, MA,

Estimated DOT Employment Numbers

DOT Employment Estimate for: **2015** 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. Reconciles or computes bill, itemized lists, and tickets showing amount due.

OES Group **41-2011 Cashiers**

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			Estimated % For this DOT		
			N	N DOTs	N	N	N	
<input type="checkbox"/>	420000	Wholesale trade	0.603	20,492	1	0.603	20,492	
<input type="checkbox"/>	441100	Automobile dealers	0.555	18,861	1	0.555	18,861	
<input type="checkbox"/>	444100	Building material and supplies dealers	2.981	101,304	2	<a href="#">WI</a>	50,652	
<input type="checkbox"/>	445100	Grocery stores	23.394	795,005	3	<a href="#">WI</a>	265,002	
<input type="checkbox"/>	445200	Specialty food stores	1.131	38,435	1	1.131	38,435	
<input type="checkbox"/>	445300	Beer, wine, and liquor stores	1.938	65,860	1	1.938	65,860	
<input type="checkbox"/>	447100	Gasoline stations	14.291	485,655	1	14.291	485,655	
<input type="checkbox"/>	448100	Clothing stores	3.412	115,951	4	<a href="#">WI</a>	28,988	

Adjust Estimates by Employment Status	TOTAL EMPLOYMENT IN THIS OES GROUP	Industry Employment of this OES Group	Estimated # Employed in this DOT Code
<input checked="" type="checkbox"/> Full-Time 48.3%	3,398,330 National 68,350 State 51,750 Region	86.637% Percent	50,601%
<input checked="" type="checkbox"/> Part-Time 51.7%		2,944,211 US National	1,719,597
<input type="checkbox"/> Self-Empl 1.0%		59,216 State: Massachusetts 44,835 Region:	34,586 26,186

**CPS Estimate:** Men 28.4% Women 71.6% Boston-Cambridge-Quincy, MA-NH

Estimated National Distribution

Estimated National Distribution of DOT Employment of:

OES: **41-2011 Cashiers**

Within NAICS **445100 Grocery stores**

Distr. %	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

Help Close

DOT Employment Estimate for: 2015 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

**Strength**

Light

**SVP**

2

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: **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"/>	420000	Wholesale trade	0.291	9,898	1		0.291	9,898	
<input type="checkbox"/>	441100	Automobile dealers	0.268	9,110	1		0.268	9,110	
<input type="checkbox"/>	444100	Building material and supplies dealers	1.440	48,930	2	<a href="#">WT</a>	0.720	24,465	
<input type="checkbox"/>	445100	Grocery stores	11.299	383,988	3	<a href="#">WT</a>	3.766	127,996	
<input type="checkbox"/>	445200	Specialty food stores	0.546	18,564	1		0.546	18,564	
<input type="checkbox"/>	445300	Beer, wine, and liquor stores	0.936	31,810	1		0.936	31,810	
<input type="checkbox"/>	447100	Gasoline stations	6.903	234,572	1		6.903	234,572	
<input type="checkbox"/>	448100	Clothing stores	1.648	56,004	4	<a href="#">WT</a>	0.412	14,001	

Adjust Estimates by Employment Status

- Full-Time** 48.3%
- Part-Time** 51.7%
- Self-Emp** 1.0%

**TOTAL EMPLOYMENT IN THIS OES GROUP**

**3,398,330** National  
**68,350** State  
**51,750** Region

Industry Employment of this OES Group

**41.846%** Percent  
**1,422,054** US National  
**28,602** State: Massachusetts  
**21,655** Region:

Estimated # Employed in this DOT Code

**24.440%**  
**830,565**  
**16,705**  
**12,648**

**CPS Estimate:** Men 28.4% Women 71.6%

Boston-Cambridge-Quincy, MA-NH

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 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

DOT Occupation: Cashier II

DOT Code: 211.462-010

SOC (OES) Title: Cashiers

Code: 41-2011

This SOC (OES) code includes 18 DOT Occupations

[View Occupations](#)

National OES Wage:

Estimated Hourly Wage:

Mean: \$9.93

Median: \$9.16

Estimated Annual Wage: \$20,640

[Details](#)

May 2014

Estimated Group Employment: 3,398,330

OES Wage for Massachusetts

Area: MSA 71650\* Boston-Cambridge-Quincy, MA-NH NECTA

Estimated Hourly Wage:

Mean: \$10.54

Median: \$9.74

Estimated Annual Wage: \$21,930

[Details](#)

May 2014

Estimated Group Employment: 51,750

OES Survey Cross-Industry Estimates. Source: BLS\*

DOT Employment Estimate for: 2015 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: **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"/>	711200	Spectator sports	0.117	3,976	6	<a href="#">WT</a>	663
<input type="checkbox"/>	713200	Gambling industries	0.147	4,996	2	<a href="#">WT</a>	2,498
<input type="checkbox"/>	721120	Casino hotels	0.167	5,675	1		5,675

Adjust Estimates by Employment Status

- Full-Time** 48.3%
- Part-Time** 51.7%
- Self-Empl** 1.0%

**TOTAL EMPLOYMENT IN THIS OES GROUP**

**3,398,330** National  
**68,350** State  
**51,750** Region

Industry Employment of this OES Group

**0.431%** Percent  
**14,647** US National  
 295 State: Massachusetts  
 223 Region:  
 Boston-Cambridge-Quincy, MA-NH

Estimated # Employed in this DOT Code

**0.260%**  
**8,836**  
 178  
 135

**CPS Estimate:** Men 28.4% Women 71.6%

DOT Employment Estimate for: 2015 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.

**Strength**

Sedentary

**SVP**

2

OES Group 33-9099 Protective Service 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"/>	221000	Utilities	0.623	704	1	0.623	704
<input type="checkbox"/>	445000	Food and beverage stores	0.651	736	1	0.651	736
<input type="checkbox"/>	448000	Clothing and clothing accessories stores	0.053	60	1	0.053	60
<input type="checkbox"/>	452100	Department stores	7.137	8,066	1	7.137	8,066
<input type="checkbox"/>	488100	Support activities for air transportation	0.875	989	1	0.875	989
<input type="checkbox"/>	561620	Security systems services	3.818	4,315	1	3.818	4,315
<input type="checkbox"/>	930000	Government	36.062	40,757	4	WT	9,016

Adjust Estimates by  
Employment Status

- Full-Time 34.5%  
 Part-Time 65.5%  
 Self-Empl 0.2%

**TOTAL EMPLOYMENT  
IN THIS OES GROUP**

**113,020** National  
**2,450** State  
**1,680** Region

**Industry Employment of  
this OES Group**

**49.219%** Percent  
**55,627** US National  
**1,206** State: Massachuset  
**827** Region:

Boston-Cambridge-Quincy, MA-NH

**Estimated # Employed in  
this DOT Code**

**22.173%**  
**25,059**  
**543**  
**372**

**CPS Estimate:** Men 47.7% Women 52.3%

Show/Add More Related Industries for this OES Group

Print

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DOT Employment Estimate for: 2015 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: 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"/>	312100	Beverage manufacturing	5.512	21,043	2	<a href="#">WT.</a>	2,756

Adjust Estimates by  
Employment Status

- Full-Time 88.5%
- Part-Time 11.5%
- Self-Empl 0.0%

TOTAL EMPLOYMENT  
IN THIS OES GROUP

**381,760** National  
**8,570** State  
**6,190** Region

Industry Employment of  
this OES Group

**5.512%** Percent  
**21,043** US National  
**472** State: Massachusetts  
**341** Region:

Estimated # Employed in  
this DOT Code

**2,756%**  
**10,521**  
**236**  
**171**

CPS Estimate: Men 46.3% Women 53.7%

Boston-Cambridge-Quincy, MA-NH

DOT Employment Estimate for: 2015 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 wraps and renders personal assistance to patrons. Moves furniture, hangs drapes.

OES Group 37-2012 Maids and Housekeeping Cleaners

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	Estimated % For this DOT		N
<input type="checkbox"/>	452100	Department stores	0.010	93	1	0.010	93	
<input type="checkbox"/>	531100	Lessors of real estate	0.838	7,790	1	0.838	7,790	
<input type="checkbox"/>	621100	Offices of physicians	0.207	1,924	1	0.207	1,924	
<input type="checkbox"/>	621400	Outpatient care centers	0.087	809	1	0.087	809	
<input type="checkbox"/>	622000	Hospitals, public and private	7.440	69,158	2	WT	3,720	34,579
<input type="checkbox"/>	623000	Nursing and residential care facilities	7.736	71,909	2	WT	3,868	35,955
<input type="checkbox"/>	713900	Other amusement and recreation industries	0.587	5,456	1	0.587	5,456	
<input type="checkbox"/>	721000	Accommodation, including hotels and motels	28.722	266,982	2	WT	14,361	133,491

Adjust Estimates by  
Employment Status

- Full-Time 59.7%
- Part-Time 40.3%
- Self-Empl 7.1%

**TOTAL EMPLOYMENT  
IN THIS OES GROUP**

**929,540** National  
**19,310** State  
**13,850** Region

**Industry Employment of  
this OES Group**

**46.651%** Percent  
**433,640** US National  
**9,008** State: Massachusetts  
**6,461** Region:

**Estimated # Employed in  
this DOT Code**

**24,702%**  
**229,615**  
**4,770**  
**3,421**

CPS Estimate: Men 15.2% Women 84.8%

Boston-Cambridge-Quincy, MA-NH

Show/Add More Related Industries for this OES Group

Print

Help

Close

Strength

Light

SVP

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		
673885042	CONVEX-GRINDER 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	ACETONE-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
529685014	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		
976684018	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		

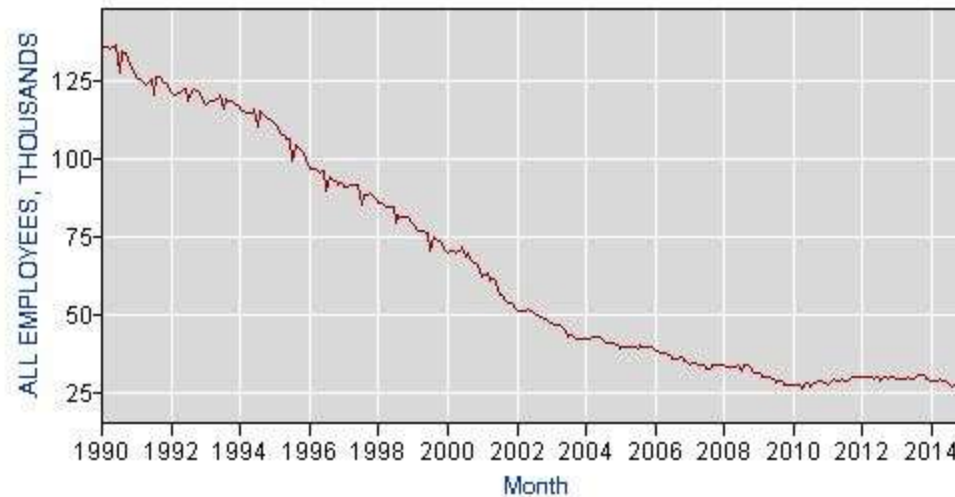
## Sedentary – Unskilled Occupations

- Span 35 CENSUS Groups
- Span 38 OES Groups
- Span 44 DOT Industries
- 94 of the 137 (68.6%) are found in 13 NAICS
- Overall size of the workforce in these 13 NAICS industries during the last 24 years
- Data obtained directly from [data.bls.gov](http://data.bls.gov)
- Certain slides derived by subtraction

## 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

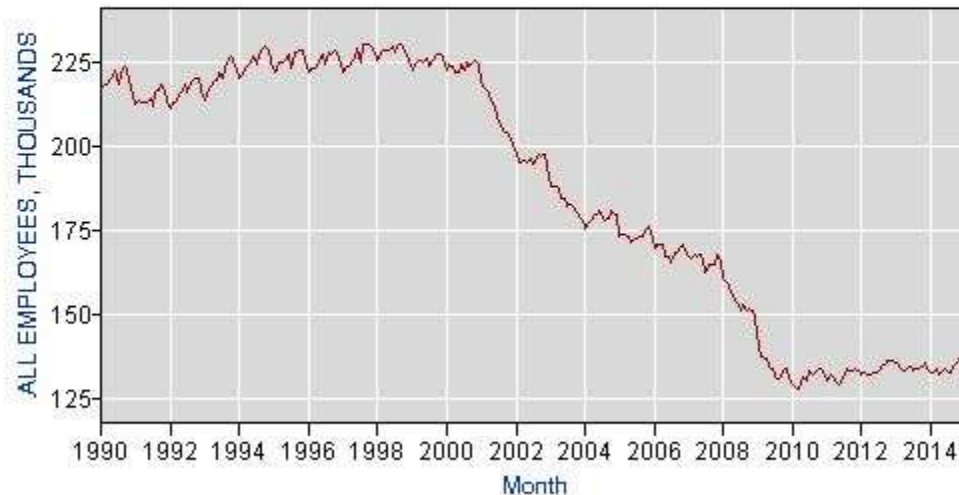
Series Id: CEU3232930001  
Not Seasonally Adjusted  
Super Sector: Nondurable Goods  
Industry: Leather and allied products  
NAICS Code: 316  
Data Type: ALL EMPLOYEES, THOUSANDS



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



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



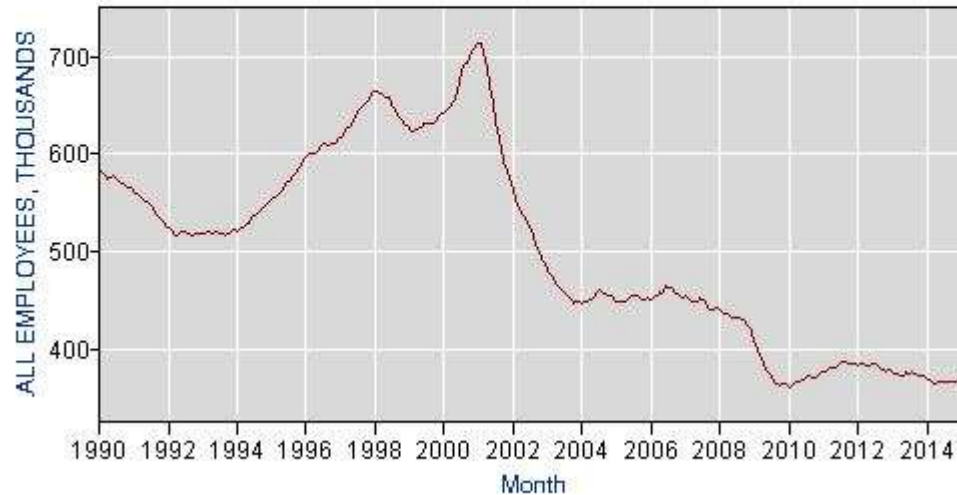
Series Id: CEU3133451901  
Not Seasonally Adjusted  
Super Sector: Durable Goods  
Industry: Miscellaneous electronic instruments  
NAICS Code: 334512,4,6-9  
Data Type: ALL EMPLOYEES, THOUSANDS



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

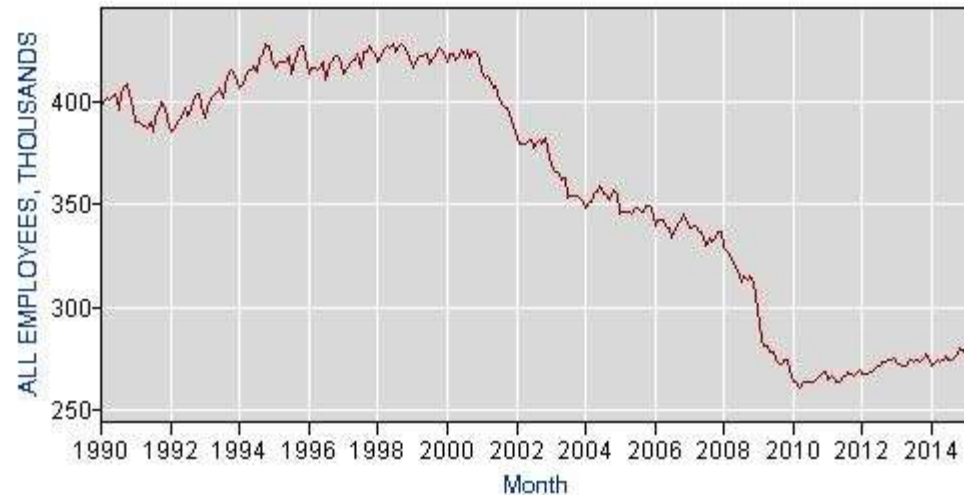
Series Id: CEU3133440001  
Not Seasonally Adjusted  
Super Sector: Durable Goods  
Industry: Semiconductors and electronic components  
NAICS Code: 3344  
Data Type: ALL EMPLOYEES, THOUSANDS



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

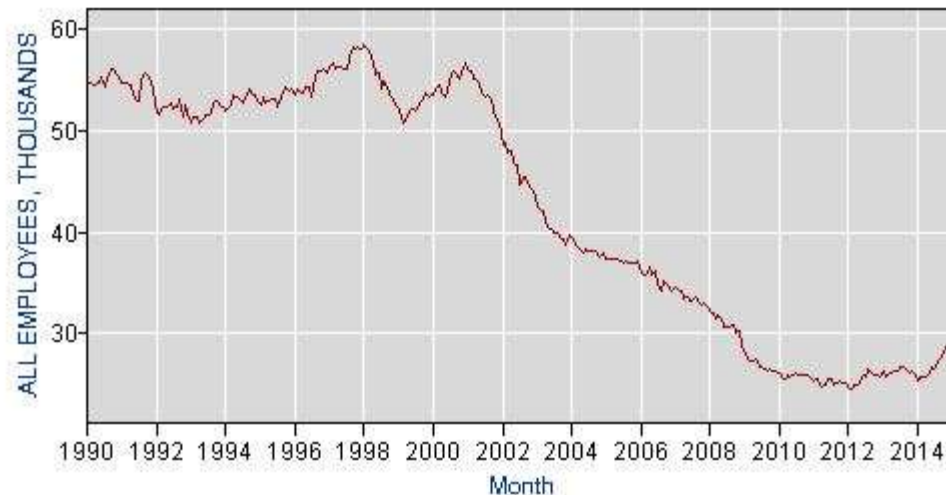
Series Id: CEU3133990001  
Not Seasonally Adjusted  
Super Sector: Durable Goods  
Industry: Other miscellaneous durable goods manufacturing  
NAICS Code: 3399  
Data Type: ALL EMPLOYEES, THOUSANDS



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

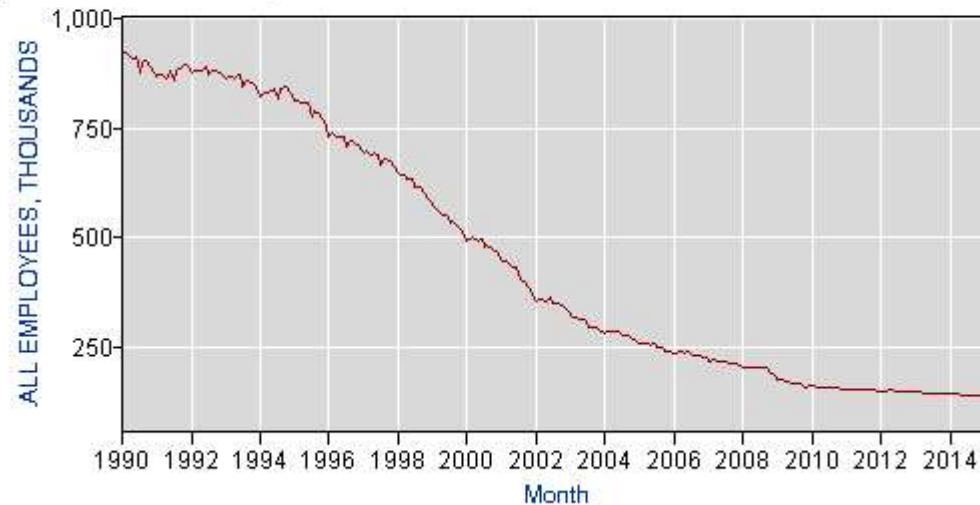
Series Id: CEU3132721201  
Not Seasonally Adjusted  
Super Sector: Durable Goods  
Industry: Flat glass and other pressed and blown glass and glassware  
NAICS Code: 327211,2  
Data Type: ALL EMPLOYEES, THOUSANDS



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

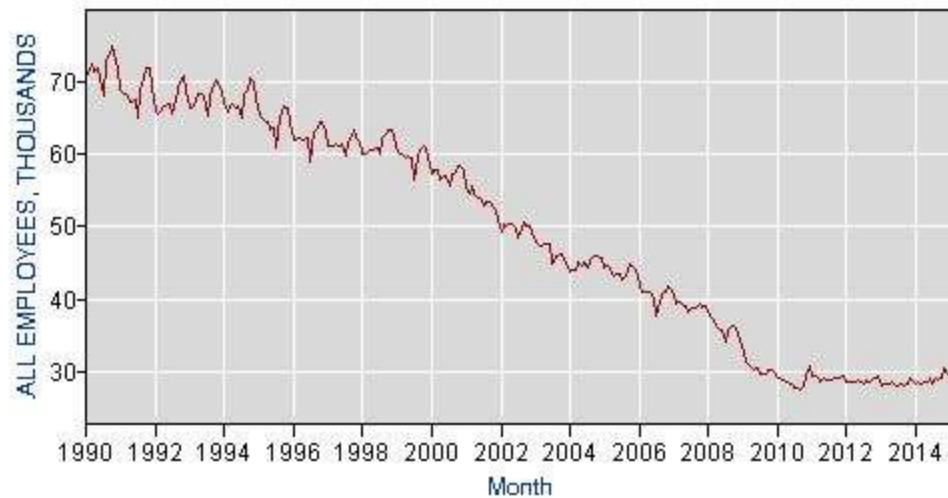
Series Id: CEU3231500001  
Not Seasonally Adjusted  
Super Sector: Nondurable Goods  
Industry: Apparel  
NAICS Code: 315  
Data Type: ALL EMPLOYEES, THOUSANDS



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

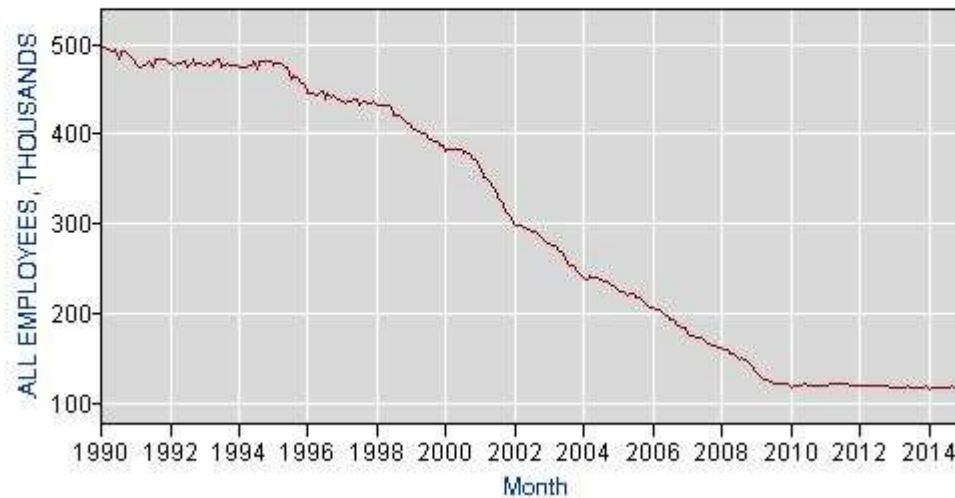
Series Id: CEU3133991001  
Not Seasonally Adjusted  
Super Sector: Durable Goods  
Industry: Jewelry and silverware  
NAICS Code: 33991  
Data Type: ALL EMPLOYEES, THOUSANDS



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



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

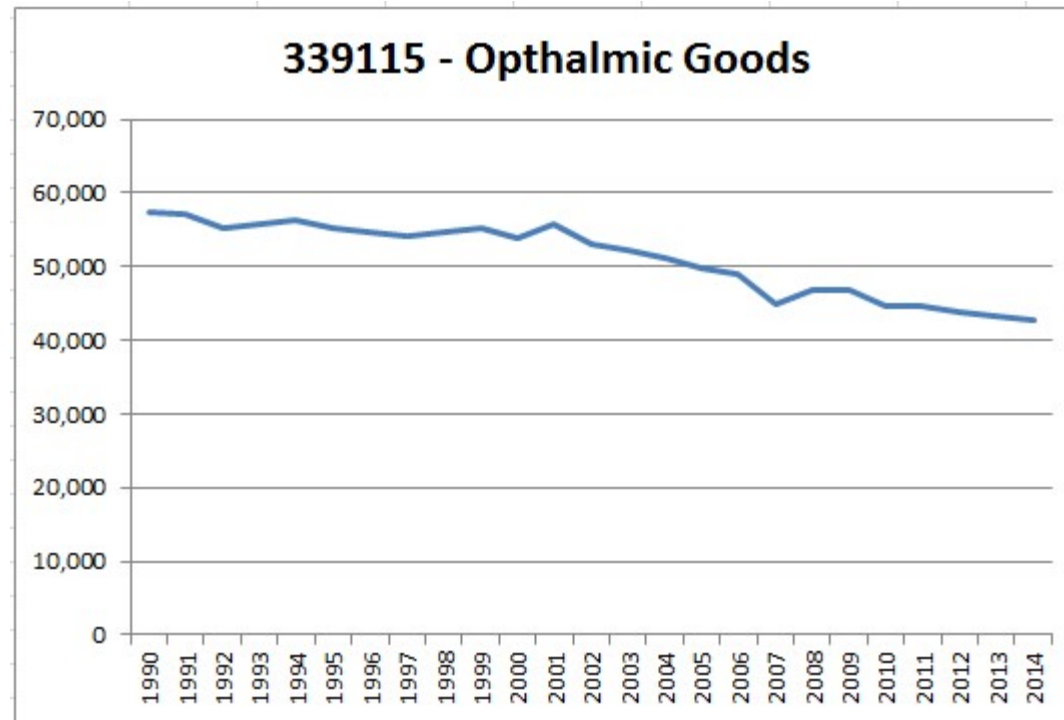


Employment in the DOT “Optical Goods” industry is  
NAICS 339115 – Ophthalmic Goods but BLS has rolled this up into 3391  
– Medical equipment and supplies

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

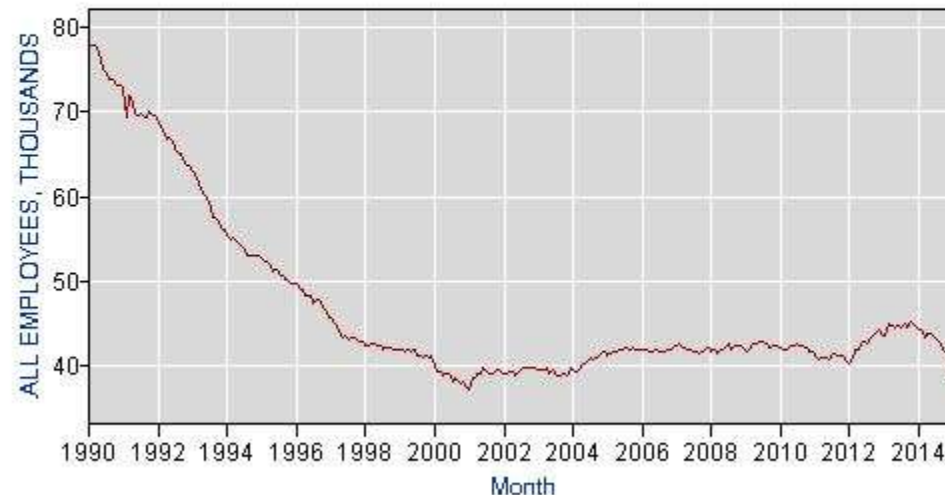


1990	57,300
1991	57,100
1992	55,300
1993	55,900
1994	56,300
1995	55,100
1996	54,700
1997	54,200
1998	54,600
1999	55,200
2000	53,800
2001	55,700
2002	53,100
2003	52,200
2004	51,200
2005	49,700
2006	49,000
2007	44,800
2008	46,800
2009	46,700
2010	44,700
2011	44,500
2012	43,800
2013	43,200
2014	42,800



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 - Ophthalmic 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



Employment in the DOT “Ordnance” industry  
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.

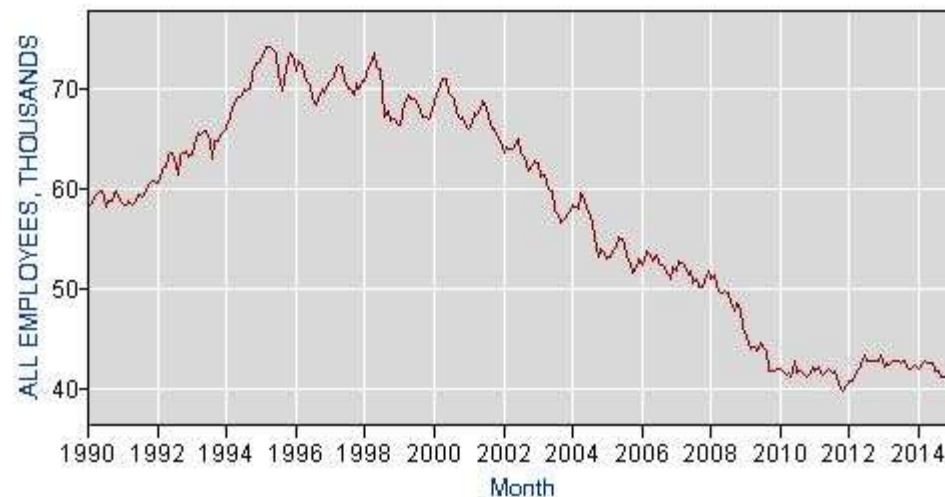
Series Id: CEU3232920001  
Not Seasonally Adjusted  
Super Sector: Nondurable Goods  
Industry: Tobacco and tobacco products  
NAICS Code: 3122  
Data Type: ALL EMPLOYEES, THOUSANDS



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



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

## Employment, Hours, and Earnings from the Current Employment Statistics survey (National)

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 30.3% from 1990 to 2014

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

## NAICS Industry Reality for 17 DOT Industries

DOT Industry	CEU Series	N DOTs	NAICS	N 1990	N2014	N Change	Percent
Boot & Shoe; Leather Products	CEU3232930001	7	316(2)	134,800	28,200	-106,600	-79.1%
Button & Notion	CEU3133999001	15	339993	220,000	134,100	-85,900	-39.0%
Clock & Watch	CEU3133451901	21	334518	158,100	110,900	-47,200	-29.9%
Electronic Component	CEU3133440001	6	3344	574,000	367,800	-206,200	-35.9%
Fabrication, nec	CEU3133990001	9	3399	402,500	275,100	-127,400	-31.7%
Glass Products	CEU3132721201	3	327211,2	55,200	26,800	-28,400	-51.4%
Glove & Mitten; Hat & Cap (Apparel)	CEU3231500001	3	315	924,300	138,400	-785,900	-85.0%
Jewelry & Silverware	CEU3133991001	7	33991	71,900	28,900	-43,000	-59.8%
Narrow Fabrics; Textile; Textile Products	CEU3231300001	7	313	491,800	117,500	-374,300	-76.1%
Optical Goods	CEU3133910001	5	339115	57,300	42,800	-14,500	-25.3%
Ordnance	CEU3132994001	4	332994	75,400	43,000	-32,400	-43.0%
Tobacco	CEU3232920001	4	3122	45,000	13,600	-31,400	-69.8%
Dolls, Toys, Games	CEU3133992001	3	33992	59,100	41,900	-17,200	-29.1%
<b>Total Employment (1990 to 2014)</b>		<b>94</b>		<b>3,269,400</b>	<b>1,369,000</b>	<b>-1,900,400</b>	<b>-58.1%</b>
<b>All Manufacutring Industries</b>			<b>31-33</b>	<b>17,649,000</b>	<b>11,987,000</b>	<b>-5,662,000</b>	<b>-32.1%</b>

94/137 = 68.6% of the Sedentary Unskilled DOT occupations are likely found in these 17 DOT Industry Groups

These 17 DOT industry classifications map to 13 unique NAICS codes

Overall, there is a 58.1% reduction in the overall workforce in these 13 NAICS groups - 1,900,400 workers overall in the last 24 years

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

These 13 NAICS groups total 33.6% of all employment losses in the entire manufacturing sector during the last 24 years

The overall decline for industries where sedentary unskilled occupations are likely to be found is nearly 2x the rate for the entire mfg sector.

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

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



# SOC 53-7064

## Packers & Hand Packagers

<b>OES Group National - Total for May, 2014*</b>	<b>53-7064</b>	<b>693,170 *</b>
* Includes both Full and Part-Time Workers		
<b>80.1% Estimated Full-Time</b>		<b>555,229</b>
<b>19.9% Estimated Part-Time</b>		<b>137,941</b>
0.2% Estimated Self-Employed		

From standard estimate process, the JBP method estimated a total of 574,638 of the 693,170 for this OES Group. This is 82.9% of the total group. Therefore, 18.1% of the group is not accounted for using the JBP method.

**\*\* Not included in these estimates is the impact of temporary workers (NAICS 5613 - Employment Services).**

When this industry is added to the mix (for Hand Packagers), **an additional 18.8% of employment** is added.

Adding this raises the employment estimate of Hand Packagers from 52,596 to 177,452 (to a total of 26.4% of employment).

After adding temp employment to Hand Packagers, the total estimate by JBP for this OES group climbs by 130,566 to 183,162

**The totals change substantially and JBP ends up overestimating employment by about 1%**

**75.9% of employment in this group can be attributed to 3 occupations:**

**Bagger (grocery stores – Medium – SVP 2)**

**Hand Bander (many industries – Heavy – SVP 2)**

**Hand Packager (Medium - SVP 2)**



# SOC 53-7064

## Packers & Hand Packers

Note the following trends:	N DOTs	OEQ Estimate		Industry Context Estimate	
				Job Browser by Industry	
<b>Sedentary</b>	2	22,780	3.40%	1,339	0.20%
<b>Light</b>	29	330,315	49.20%	56,341	8.20%
<b>Sedentary + Light</b>	<b>31</b>	<b>353,095</b>	<b>52.50%</b>	<b>57,680</b>	<b>8.40%</b>
<b>Medium</b>	18	205,023	30.50%	400,636	58.60%
<b>Heavy</b>	10	113,902	16.90%	225,600	33.00%
<b>Medium + Heavy Combined</b>	<b>28</b>	<b>318,925</b>	<b>47.50%</b>	<b>626,236</b>	<b>91.60%</b>
<b>TOTAL</b>	<b>59</b>	672,020 *			

\* Data for May 2013

SOC 53-7064

# Packers & Hand Packagers

	<u>1997</u>	<u>2014</u>	<u>2024</u>
<b>Employment</b>			
<b><u>All Workers</u></b>	962,770	693,170	706,900
Change		-28%	2%
<b><u>Temporary Workers</u></b>	142,490	124,077	143,600
Change	14.80%	-12.90%	15.70%
<b>Percent of Work Force</b>	14.80%	17.90%	20.30%

## General Increase in Temp Jobs

- Change to Temporary Workers for some occupations  
(29.7% of the DOT occupations n=3,791 DOTs)
- For some SOC groups, more than 1/3 of employment is temporary now!
- See handout for more details

## Impact

- SSA
  - Better understanding of the source of variance
  - 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 (civil litigation)

## 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.

# Vocational Expert Perspectives

Amy Vercillo, Ph.D.



# OccuBrowse – Web-Based

Coming **soon** to an SSA PC near you!

<http://occubrowse.ba.ad.ssa.gov>

## Final Thoughts

- **Estimation Methods Matter**
- **There is substantial variation in estimate methods**
- Industry Context method is rooted in existing BLS statistics – drawn from different govt sources
- “Magic” of SkillTRAN is limiting the estimate to the industries that are relevant for a specific DOT occupation
- Job Browser *Pro* can be used to quote whole OES group numbers or DOT-specific estimates
- Full-time vs. Part-time relates to SGA
- Self-Employment is significant in some occupations
- Temporary Workers are growing in some groups



**Thank You**

**Jeff Truthan**

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