

Take This Job and *Shove It* !

National Association of Disability Representatives

March 24, 2015

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www.skilltran.com

Objectives

- **Company Background**
- **Common Public Sources of Occupational and Labor Market Data**
- **Job Browser *Pro* and OccuBrowse software**
- **Current Methods to Estimate Employment**
- **SkillTRAN Industry Context Method**
- **Questions to ask Vocational Experts**

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
- 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).

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 List Serve topics
- Attentive to IARP list server for alternate titles
- Author of recent book chapter about Career Development
- ABVE "Lifetime Achievement Award" – 2014
- Founding member of Special IARP Task Force to study Sedentary/Unskilled Occupations
- Carefully tracking SSA's funding of the BLS-NCS effort to "build a new OIS" for disability adjudication

Supporting Materials

- Full Slides – Contact presenter for copy
- Pocket Guide to the DOT
- Technical Discussion of Industry Context Methodology – Available at:
http://www.skilltran.com/DOTempnum_method.pdf
- Exhibit Booth for specific product literature

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

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 (= 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

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

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

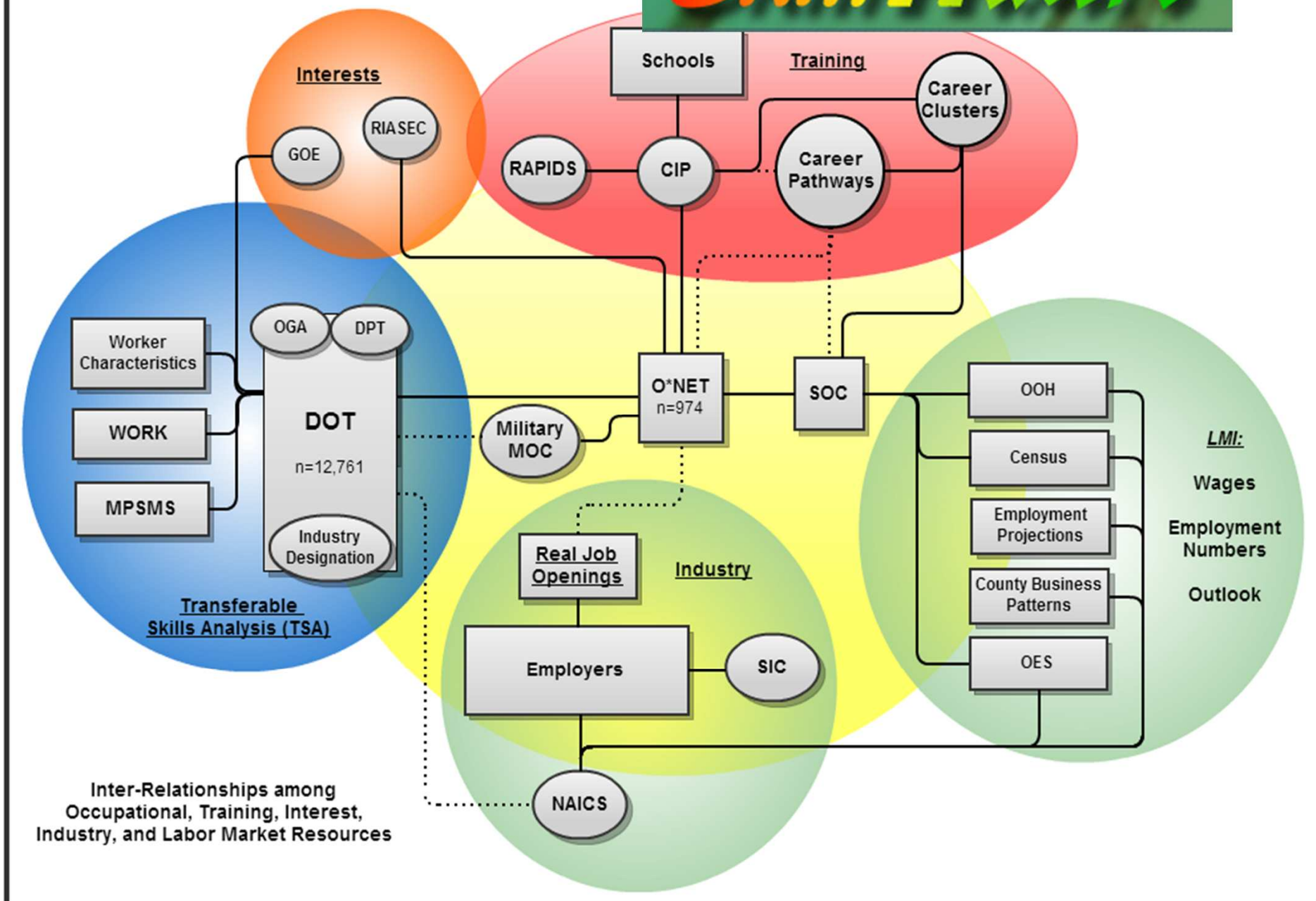
NCS — National Compensation Survey

- 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 data collection for physical and environmental demand and mental/cognitive 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

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

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 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]

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

Skill *TRAN* 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

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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.

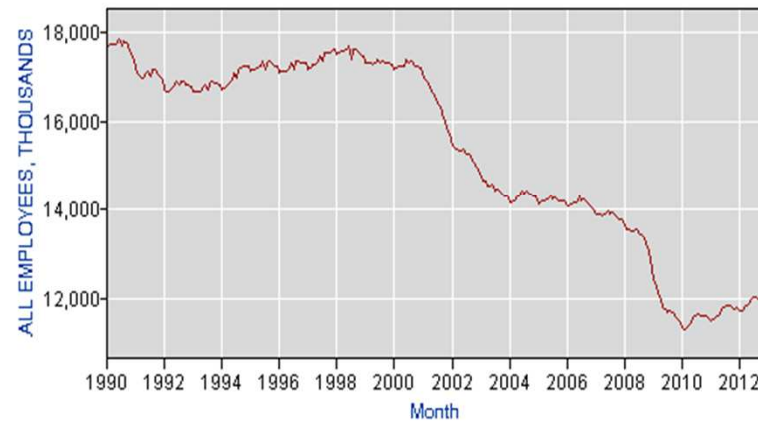
Examples of Employment Number Estimates

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

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 22 years
- Data obtained directly from data.bls.gov
- Certain slides derived by subtraction

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



Download: [.xls](#)

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



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

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 method estimates unskilled sedentary employment at about 700,000
- Simple Math overestimates the employment of Sedentary Unskilled Occupations by about 350%

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.



Thank You

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