



The Occupational Employment Statistics (OES) Program: Cover Letter and Brochure Experiments

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Marketing Establishment Surveys

- Question: What in the area of marketing can BLS do to improve establishment survey response rates?
- The desired marketing goals included increases in:
 - respondent awareness of the survey program,
 - the importance of responding to the survey,
 - how to use information from the survey and from the Bureau of Labor Statistics (BLS), and
 - response rates, of course!



Project Participants

- Starting line up
 - Gerry Perrins – EA&I/Philadelphia Regional Office
 - John Pinkos – OFO/DC
 - Tom Shaffer – NCS/ SF Regional Office
 - George Stamas – DOES/DC
 - Stan Suchman – RC, Dallas Regional Office
 - Sheila Watkins, Chair, RC, Philadelphia Regional Office
- Later acquisitions
 - Carrie Jones – DOES
 - Polly Phipps – OSMR
 - Clyde Tucker – OSMR
- State participants
 - Tom Gallagher – WY
 - Bob Murdock – NV
 - George Nazer – NH
 - Mike Polzella – CT
 - Charlie Saibel – WA
- OPUBSS participants
 - Bruce Davis
 - Monica Gabor



OES Background

- 1.2 million sample units across 3 years
- Semi-annual panels
- Federal/State cooperative effort
- Collects employment across wage intervals for each occupation at an establishment
- Primarily a mail survey -- printed and mailed from a central facility
- Mailing package includes: State specific letter and flyer, questionnaire, and return envelope
- 78% response rate; individual states range from approximately 60 to 90%



Activities Considered

- Develop a flyer, using best practices from regional offices and state flyers as insert with survey mailing.
- Develop an improved solicitation letter using best practices from current state letters.
- Develop customized mailing inserts for specific industries.
- Use back page of survey form for industry-specific information, or for “how-to-use” information.
- Develop OES website for respondents – prototype for agency:
 - Motivational/response-oriented materials
 - Survey instructions and forms
 - “How to use OES/BLS data”



Final Choices

- Activities
 - Solicitation/follow-up letters based on “best” practice
 - Single brochure in addition to State-composed fact sheet
 - Experimental Design
 - Split panel experiment within States
 - Stratified objectively
 - Avoid self-selection



Experimental Design

- Two experimental treatments
 - 1) Standardized solicitation and follow-up letters
 - 2) Standardized solicitation and follow-up letters and OES program brochure
- Experimental treatments will be compared to “No-treatment” case
- States stratified by response rate and sample size and randomly selected:
 - 5 States for treatment (1) above
 - 8 States for treatment (2) above
 - 2 States held in reserve
- Design selected, in part due to printing constraints



The Letters

- **Solicitation and follow-up letters are an integral part of the survey package**
- **Letters should include specific information conveyed in clear and concise language**
- **Don Dillman's recommendations for cover letter content and style**
 - Date and salutation
 - What is this letter about
 - Why the request is important and useful
 - Why the company was selected
 - Confidentiality
 - Willingness to answer questions
 - Thank you
- **Content analysis of state letters and flyers**



The Test Letter

- On State letterhead
- State and State agency identified
- Fields open for State contact information
 - Fax number
 - 800 contact number
 - Contact for electronic transmission
- State web page
- State email address
- Followed Dillman's recommendations



Designing the Brochure

- The content includes:
 - Program description and importance
 - How data are used (simple explanations)
 - Reasons to participate (direct appeal)
 - Provides examples of industry, state and metropolitan level data
 - Data at a state and metropolitan area level may be perceived as more relevant to potential respondents
- We designed the brochure using known readability principles and earlier research carried out for the OES survey on brochure design



Final Brochure Features

- Targeted for respondents
- Convey depth of the data
 - States
 - All metropolitan areas
 - Industry
 - Detailed occupations
 - Employment and earnings
- Uses of the data
- Importance of responding
- Contact information

• Opening panel

Back

Cover

Why is my help needed?

YOU count! Your accurate survey answers are critical, since businesses like yours are our only source of information. Good information depends on your survey response.

Where ...

...can I get help?

To complete the survey, refer to your survey packet.

To find your State contact person, refer to your survey packet or go to:

<http://www.bls.gov/respondents/oes>

...can I get survey results?

To find OES data for States, metropolitan areas, and the Nation: <http://www.bls.gov/oes>

To find your Bureau of Labor Statistics (BLS) regional office:

<http://www.bls.gov/bls/regnhome.htm>

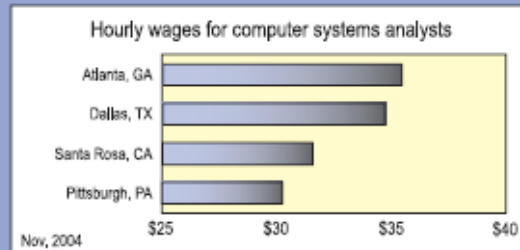
To reach BLS national office of Occupational Employment Statistics (OES):

Phone:
(202) 691-6569

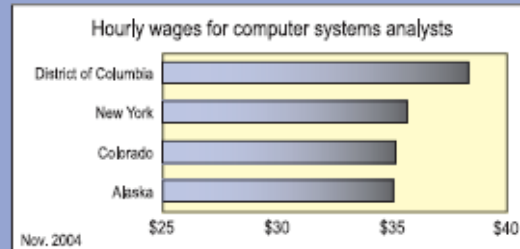
E-mail:
oesinfo@bls.gov

OES produces employment and wage estimates for 800 occupations

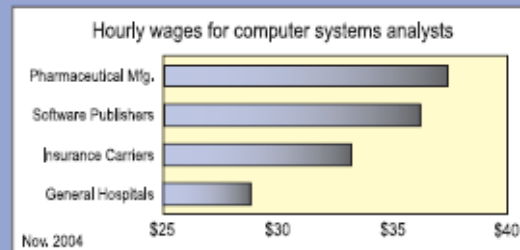
...in more than 330 metropolitan areas



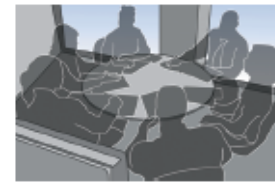
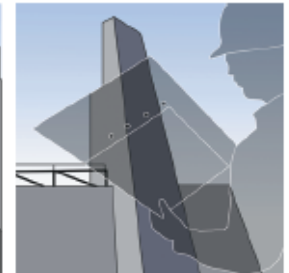
...all States and the District of Columbia...



in over 300 industries



OCCUPATIONAL WAGE INFORMATION FOR EMPLOYERS



*Occupational
Employment
Statistics*

U.S. Bureau of Labor Statistics and
cooperating State agencies

Inside Panels

What is the Occupational Employment Statistics (OES) Survey?

Employment and wage information on 800 occupations in over 300 industries. By contacting 1.2 million firms, this survey represents more than 330 metropolitan areas, all States, D.C., and U.S. territories.

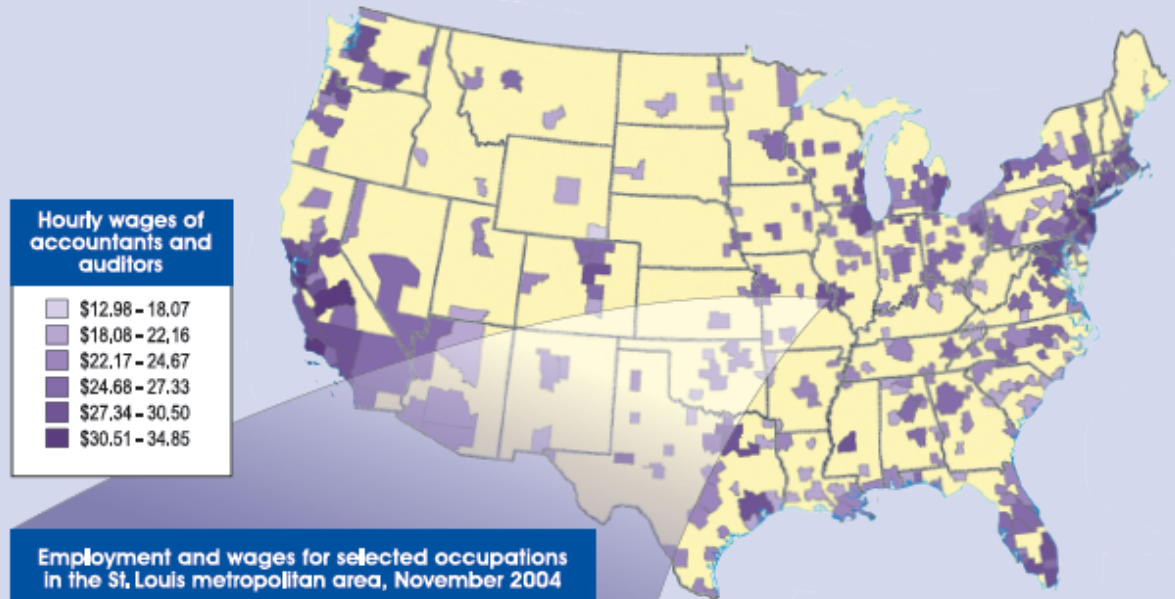
Who benefits?

Employers, trainers, counselors, educators, students, and industry and government officials. This survey reduces your cost of obtaining reliable compensation information.

How is OES used?

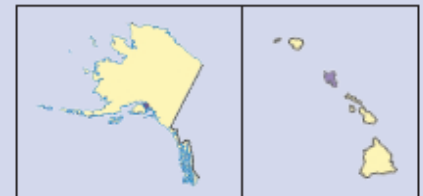
- Determine equitable and competitive pay
- Develop recruiting packages
- Understand labor costs for new markets
- Target educational needs in your community
- Help students and job seekers make good career decisions

Wages across the Nation and in your local area



Employment and wages for selected occupations in the St. Louis metropolitan area, November 2004

Occupation	Employment	Mean Hourly Wage	Mean Annual Wage
Cashier	34,930	\$8.56	\$17,810
Construction Laborer	9,380	18.69	38,880
Electrician	6,920	27.81	57,850
Executive and Administrative Assistant	14,000	17.99	37,420
Lawyer	5,380	57.76	120,130
Machinist	3,400	18.44	38,350
Mechanical Engineer	1,950	32.33	67,250
Registered Nurse	25,560	24.14	50,210
Security Guard	9,510	10.99	22,870





Analyzing Results

May 2006 Panel

- Analyzed at the Establishment level
- Simple response rates
 - Overall
 - By size, industry, msa
- Logistic regression
 - Used to compensate for state-level design to control for characteristics, such as size, industry and msa, which aren't evenly distributed across states.



Overall Response Rate and by Employment Size

	Letter		Letter/Brochure		Control	
	N	Response Rate	N	Response Rate	N	Response Rate
Total	23741	76.8	22667	79.0	125831	76.0
Employment Size Class						
1-9	7205	90.2	7785	88.1	42673	86.7
10-49	9570	77.3	9233	79.7	50688	75.1
50-99	3469	67.1	2661	70.4	16012	66.0
100-249	2313	58.9	1771	62.3	10169	61.0
250-999	1018	53.8	1050	59.1	5385	60.0
1000+	166	52.4	167	57.5	904	62.6



Response Rates by MSA

	Letter		Letter/Brochure		Control	
	N	Response Rate	N	Response Rate	N	Response Rate
Total	23741	76.8	22667	79.0	125831	76.0
MSA						
Not MSA	3782	83.7	5987	82.8	25199	81.3
50-149,999	1699	82.2	1606	80.8	10271	82.0
150-249,999	1561	79.8	1890	79.9	9960	80.9
250-499,999	2377	79.7	3687	82.4	13628	77.3
500-999,999	2313	78.4	2232	79.7	13714	77.8
1,000,000+	12009	72.6	7264	73.4	53055	70.6



Response Rates by Industry

	Letter		Letter/Brochure		Control	
	N	Response Rate	N	Response Rate	N	Response Rate
Total	23741	76.8	22667	79.0	125831	76.0
Industry						
Natural resource, mine	310	89.4	287	75.6	1193	73.6
Construction	1992	81.1	2047	81.6	10561	79.0
Manufacturing	2515	73.1	2416	78.4	11994	75.0
Trade, transp, utility	5295	79.6	5375	79.3	29459	76.4
Information	555	62.7	517	71.2	2880	64.7
Financial activities	1598	71.3	1516	78.8	8819	72.3
Prof, business serv	3389	70.6	3098	76.6	18018	72.4
Education, health serv	3609	76.7	3027	78.2	18222	78.6
Leisure, hosp serv	2803	81.7	2612	79.8	14867	74.3
Other serv	1241	80.9	1231	85.9	7038	84.0
Local govt	434	78.3	541	78.6	2780	83.5



Logistic Regression Analyses

- Whether the establishment responded or not
- Establishment level variables
 - Employment Size
 - MSA
 - Industry super sector
- State level variables
 - state environmental questionnaire



State Environment Questionnaire

- Staffing
 - FTE, % Managers, use of temporary staff, staff experience, staff changes in the past year
- Survey practices
 - Address refinement postcards, additional nonresponse letters, offered email data collection
- Nonresponse telephone followup timing
 - After 1st, 2nd, 3rd or 4th mailing
- Survey administration problems
 - Late mail, other mail problems
- State events
 - Economic changes, agency restructuring or transitions



Model Fit

Establishment-level Model Summary Statistics (N=172,239)

Model	Max-rescaled R Square	Likelihood ratio	Pr > Chi Sq
(1) Treatment only	.0009	103.06	.0001
(2) Other Variables only	.0889	10483.53	.0001
(3) Treatment and others	.0898	10588.34	.0001



Model Coefficients

Parameters	Pr > ChiSq	Odds Ratio	Response Rate
Intercept	<.0001	2.3	
Treatment			
Letter	<.0001	1.1	76.8
Letter/Brochure	<.0001	1.1	79.0
Control		1.0	76.0



Model Coefficients

Parameters	Pr > ChiSq	Odds Ratio	Response Rate
Emp Size Class			
1-9	<.0001	5.1	87.3
10-49	<.0001	2.4	76.0
50-99	<.0001	1.5	66.7
100-249	.0232	1.1	60.9
250-999	.5727	1.0	59.0
1000+		1.0	60.6

Treatment Interacting with Size

	Letter			Letter and Brochure			Control	
Parameters	Pr > ChiSq	Odds ratio	Response Rate	Pr > ChiSq	Odds Ratio	Response Rate	Odds Ratio	Response Rate
1-9	<.0001	2.2	90.2	.05	1.4	88.1	1.0	86.7
10-49	.00	1.7	77.3	.01	1.6	79.7	1.0	75.1
50-99	.01	1.6	67.1	.01	1.5	70.4	1.0	66.0
100-249	.06	1.4	58.9	.13	1.3	62.3	1.0	61.0
250-999	.36	1.2	53.8	<.33	1.2	59.1	1.0	60.0
1000+		1.0	52.4		1.0	57.5	1.0	62.6



Model Coefficients

Parameters	Pr > ChiSq	Odds Ratio	Response Rate
MSA			
Not MSA	<.0001	1.4	81.8
50-149,999	<.0001	1.3	81.9
150-249,999	<.0001	1.3	80.6
250-499,999	<.0001	1.2	78.5
500-999,999	<.0001	1.3	78.1
1,000,000+		1.0	71.2



Model Coefficients

Parameters	Pr > ChiSq	Odds ratio	Response Rate
Industry			
Nat res, mining	<.0001	0.4	76.6
Construction	<.0001	0.5	79.7
Mfg	<.0001	0.5	75.2
Trade, trans, utility	<.0001	0.5	77.2
Information	<.0001	0.3	66.3
Finance	<.0001	0.3	73.0
Prof & bus	<.0001	0.4	72.6
Educ, health	<.0001	0.6	78.2
Leisure, hospitality	<.0001	0.5	76.0
Other services	<.0001	0.6	83.8
Local government		1.0	82.1



Conclusions

- Results suggest that both the letter and the letter/brochure treatment have a positive effect on response rate.
- Many other expected results in the coefficients—
 - Response lower as employment and MSA size
- The interaction between size and experimental treatments suggests a targeted approach
 - Possible opportunities to target custom mailing
 - Size and treatment; smaller employers
 - Perhaps industry and size; smaller employers in construction, finance, and manufacturing.



Work Ahead

- Completion of a cost analysis to determine whether the observed changes in response rates would justify the cost.
- Explore interactions more fully
 - The industry by size interaction is important
 - The mix of industry and size in individual states needs to be taken into account.
- Unmeasured state procedures also might be important.
 - More extensive understanding of nonresponse follow-up and other survey procedures in each state might help explain state differences within treatment groups.