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2011 Salary Survey of Business, Industry, and Government Statisticians

Final Report
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2011 Salary Survey of Business, Industry, and Government Statisticians

Table of Contents

2011 SPAIG SALARY SURVEY

I. SURVEY DESIGN AND ADMINISTRATION

Background

The American Statistical Association (ASA) has conducted salary surveys of its membership over several years. The primary purpose of these surveys was to obtain benchmark salary information for statisticians in the US that could be referenced by students, statisticians, and employers of statisticians. This year, the Biostatistics Consulting and Survey Center (BCSC) in the Department of Biostatistics at the Georgia Health Sciences University (GHSU) was again contracted by the ASA to design and implement the survey of its non-academic members in the US who were employed by Business, Industries and Government (B/I/G) for the above purpose. This report describes the procedures followed for the survey design and data collection, and the final survey outcomes. The survey was conducted under the directives of Dr. Keith Crank, ASA Assistant Director for Research and Graduate Education, and ASA's Statistics Partnership among Academic, Industry & Government (SPAIG) committee, chaired by Dr. Barry Nussbaum.

For this survey, a **STATISTICIAN** was defined as a person employed in business, industry, or government (not academia) who: (1) had a university/college degree (Bachelors, Masters, Doctorate) in statistics, biostatistics, or mathematical statistics, **OR** had the equivalent of one year of graduate course work in academic statistics (including a Federal Government employee who meets the education requirements for a Mathematical Statistician), **AND** (2) currently used statistical reasoning or performed statistical analyses (including supervision of statisticians) as part of his or her job.

Project Staff

Representatives of ASA involved in this project are Barry Nussbaum, Chair, Statistics Partnership among Academe, Industry & Government (SPAIG) Committee, and the other members of the SPAIG Committee. Department of Biostatistics and BCSC staff members involved in this project are listed in the following table.

GHSU BCSC Staff		
Name	**Title**	**Project Responsibilities**
James K. Dias, PhD	Associate Professor and Director, BCSC	Survey design, implementation, all on-line programming, and final report preparation
Patricia Hall, MS	Biostatistician and Manager, BCSC	Survey design, administration, project monitoring, and implementation

Survey Design

Past B/I/G surveys conducted by and for the ASA (prior to the 2007 survey) focused on employers. Sampled ASA member employers were asked to provide salary and demographic information for all statisticians on staff. Difficulties with both privacy and the accessibility of information resulted in response rates lower than desired. The 2007 survey focused on individual ASA members and resulted in a significantly higher response rate (over 60%). In 2009 and 2011, the BCSC proposed changes in both sample and survey design that it hoped would both produce rates matching or exceeding those of past surveys and increase the accuracy and usefulness of the information provided. These recommendations were accepted by ASA and SPAIG, and were implemented in both the 2009 and 2011 surveys.

For conducting this year's survey, ASA provided a database of ASA member B/I/G statisticians. The database consisted of 4,933 members from which it was decided by SPAIG and BCSC to invite, by **e-mail invitation only, all members** to take the survey on-line. (No sampling was conducted as was the case with previous surveys.)

Changes to Previous Sample Survey Design

BCSC staff worked in collaboration with the ASA and SPAIG to redesign the 2011 survey implementation and questionnaire. There were two major changes: (1) We did not conduct any sampling or postal mailing of invitations and paper-based surveys, as we did in the 2009 survey. Instead, e-mail invitations were mailed to **all** ASA member B/I/G statisticians and the survey was conducted entirely on-line. This eliminated the need for data entry of returned paper-based surveys. (2) Those surveyed were asked to report their annual base salary (in dollars) and were instructed to include bonuses, incentives, or other forms of monetary reward. (In the 2009 survey, they were instructed not to include these other forms.)

The final 2011 survey was brief and consisted of only eleven items. A password and user ID with a unique PIN # was assigned to each individual to limit survey access and to track responses. Advance notice of the survey was advertized in the March edition of the ASA Enews and a notice was placed on the SPAIG website.

II. SURVEY IMPLEMENTATION AND PROCEDURES

Project Planning

Planning was completed in the winter of 2011. The survey methodology and scope of work was approved by SPAIG. The GHSU Human Assurance Committee (Institutional Review Board) approved the research protocol. On March 1, 2011 the contract was executed and all GHSU approvals were obtained allowing us to begin the actual work on the survey.

Programming of the on-line survey and all preliminary work necessary to implement the e-mail invitations were completed by the end of March 2011. The survey period extended from early April through the middle of May.

Survey Development

The 2011 SPAIG survey was developed in collaboration with ASA project representatives. The questionnaire was redesigned as noted above and the final survey document appears in Appendix A.

The BCSC again chose SurveyMonkey® to implement the on-line survey. The on-line survey was programmed in late March of 2011 by the BCSC Director. The instrument pages were coded with check boxes for categorical response items with "strong" typing and format control. The instrument was deployed on SurveyMonkey's website (www.surveymonkey.com) with full user ID and password protection. A unique "collector" was used for each phase of the survey.

The layout of the web instrument was designed using SurveyMonkey's design templates and closely mimicked the layout of the previous paper version of the questionnaire. After entering one's unique PIN, the first question was whether the participant was employed as a statistician (with proper definition): (1) if the respondent answered "NO" they were taken to the end of the questionnaire; (2) If they answered "YES" they were taken to a new page to answer the remaining 9 questions. A minimal amount of scrolling was required to view all questions on a single page.

The online survey was extensively tested and validated. The on-line survey was opened and e-mail invitations were sent on April 6, 2011.

Site Security

Each ASA member in the database was assigned a password with a unique PIN # to be entered at the survey's first page in order to gain access to the survey itself. The PIN served as a case ID and key, and a combination of the password and PIN # made survey access by unauthorized persons highly unlikely. Instructions in the e-mail invitations/reminders provided a name, telephone number, and e-mail address of BCSC project staff that would be available to assist with any difficulties encountered in accessing the survey as well as to answer questions about the survey itself.

All data of a confidential nature was stored on GHSU's secure/protected storage area with a key (the unique PIN #) that was used as a link to de-identified data for subsequent data processing.

Respondent Activity

Respondents were allowed to access their survey as often as they wished using assigned usernames and passwords. If a respondent accessed the survey multiple times, any responses from earlier visits were stored and visible upon re-entering the survey. In addition, answers to specific items could be changed as often as desired until they exited the last page of the survey. When they exited the final page their responses for that session were stored as the "FINAL" version.

Data and Response Management

All data and paradata, as well as contact information, were downloaded from SurveyMonkey as an SPSS data file. All data processing and report generation was done using SPSS (version 19). Contact information, survey completion status, and general comments were maintained for each respondent in SPSS data files, which was accessible to project staff for reference and for range/validity checks. Periodic progress reports were made available to project staff as needed.

Data Collection Procedure

An Excel database of n = 4,933 ASA B/I/G members was received from the ASA in November 2010 and was processed, examined and cleaned by BCSC project staff. Of the 4,933 members, 334 had missing (n = 67) or invalid (n = 267) e-mail address. On April 6, 2011, the initial e-mail invitation was sent to 4,599 members with valid e-mail addresses (n = 4,933 - 334 = 4,599). This invitation described the study and its purpose, and invited the ASA members to participate; it also included the URL for the on-line survey and the assigned username and password to be used to access the survey. The e-mail invitation letter can be found in Appendix B. On April 15 and April 26, 2011 reminder e-mails were sent to those that had not yet responded. The survey was closed on May 10, 2011.

III. FINAL RESULTS AND RESPONSE RATES

Of the 4,599 with valid e-mail addresses that were invited to participate, 1,802 responded to the survey.

Respondents that were not employed as a statistician or not employed at all, including retired individuals, were classified as not eligible. In addition, respondents who were employed in academia were also classified as ineligible.

Of the 4,599 invited to participate, responses were received from 1,802 individuals with valid addresses (39.2%). Of the remainder with valid addresses, 2,797 either refused or did not respond (60.8%). Based on the responses received, it was determined that 155 individuals were not eligible to be included in the final analysis. Those ineligible were either employed in academia, unemployed, not employed as a statistician, retired, or reported that they did not meet the definition of a statistician. Thirty-two individuals that were eligible and responded did not report salary information and were re-coded as “non-responders”. When adjusted for delivery failure, eligibility, and non-response, 1,615 (1,802 – 155 - 32) eligible responses were received from an adjusted universe of eligible members of 4,444 (4,599 - 155), for an adjusted **response rate of 36.3%**.

The 2009 SPAIG survey had a response rate of 44.7% and our goal was to match or exceed that rate. The 2011 SPAIG survey response rate was 8.4% lower than the previous survey.

Respondent Characteristics

One thousand six hundred fifteen (1,615) eligible ASA members responded to the B/I/G salary survey. Their reported characteristics are given in Appendix C for their current type of employment (full-/part-time), gender, employer classification, highest degree, geographic region, managerial responsibility, years of experience as a statistician, and the application area/job type of current employment.

Eighty-two (82) reported being employed part-time (5.1%) with an average percentage effort of 54% ± 22% (mean ± SD). Their reported percentage effort ranged from 13% to 90% (median 50%).

Sixty-seven percent (67%) of respondents were male. The majority (60%) reported employment by a for-profit-business or industry, followed by federal government (20%) and non-profit organization (11%). Fifty-seven percent (57%) reported their highest academic degree as Doctorate, 41% reported as Masters and 2% reported as Bachelors. Approximately one-third (33.5%) reported working in the South-Atlantic region of the US, 18% reported Middle-Atlantic and 14% reported the Pacific region. Forty-two percent (42%) reported having managerial responsibility in their current position.

Respondents were asked the first date (month, day, and year) they were ever employed as a statistician. The number of years since first being employed as a statistician (experience) was calculated as the range from reported starting date to April 15, 2011. The average experience was 20.4 years ± 11.8 years. Experience ranged from zero to 66 years with a median of 20 years.

Almost one-third (32.3%) reported working in the pharmaceutical area, 23% in other medical/health-care-related areas, 12% in general consulting, and 5% in the survey-/market- research area.

Salary Statistics

Respondents were asked to report their annual base salary (in dollars) and were instructed to include bonuses, incentives, or other forms of monetary reward. Salary (dollars per year) was "annualized" for part-time-employed respondents. Salary statistics are reported in tables as full-time equivalents in thousands of dollars per year.

The average salary reported was $159,880 ± $113,680 and ranged from $0 to $2,500,000. The median salary reported was $138,000.

Various descriptive statistics are given in Appendix C for the following variables:

1. Quantitative Variables:

    a. Part-Time % Effort
    b. Salary
    c. Years Experience as a Statistician

2. Categorical Variables:

    a. Full-/Part-Time
    b. Gender
    c. Employer
    d. Highest Degree
    e. Geographic Region
    f. Managerial Responsibility
    g. Years Experience (coded into intervals)
    h. Application Area or Job Type

Geographic Region was coded as:

Geographic Region	States
South Atlantic	DE, DC, GA, FL, MD, NC, SC, VA, WV
Middle Atlantic	NJ, NY, PA
East North Central	IL, IN, MI, OH, WI
Pacific	AK, CA, HI, OR, WA
New England	CT, MA, ME, NH, RI, VT
West North Central	IA, KS, MN, MO, ND, NE, SD
Other	States not listed above

Appendix D gives Percentiles (10, 25, 50, 75, 90) of Annual Salary overall and for levels of the following Variables:

1. Employer
2. Geographic Region
3. Managerial Responsibility
4. Gender
5. Highest Degree
6. Years Experience
7. Application Area or Job Type

Appendix E gives Percentiles (10, 25, 50, 75, 90) of Annual Salary for Managerial Responsibility by Years Experience by Highest Degree (Masters and Doctorate only).

Appendix F gives Percentiles (25, 50, 75) of Annual Salary for Bachelor as Highest Degree by Experience.

Appendix G gives Percentiles (10, 25, 50, 75, 90) of Annual Salary for Employer by Highest Degree.

Appendix H gives Percentiles (10, 25, 50, 75, 90) of Annual Salary for Employer by Application Area or Type of Job by Highest Degree (Masters and Doctorate only).

In the salary tables listed above, we suppressed displaying the 10^{th} and 90^{th} percentiles for table rows (categories) with fewer than 20 observations. We also suppressed all percentiles for table rows (categories) with less than 10 observations.

IV. COMMENTS AND SUGGESTIONS

The response rate was only 36.3% and is our major concern. Comments and suggestions follow.

Comments:

- On February 1, 2011, the Medical College of Georgia (MCG) changed its name to the Georgia Health Sciences University (GHSU). This name change may have reduced our name recognition. Several of those invited to participate in the survey, commented that they were reluctant to provide salary information to an unknown entity.
- Others reported their reluctance to take a SurveyMonkey survey. Some sites block SurveyMonkey and classify it as “Spam”.
- People are surveyed more and more and are becoming reluctant to participate in any survey. Among their concerns are identity theft, loss of privacy, and “survey fatigue”.

Suggestions:

- Conduct an even more aggressive campaign to advertise and inform members about the survey and its importance to our profession.
- Instead of GHSU, have the ASA send out initial e-mail invitations and any reminders.
- Consider alternatives to using SurveyMonkey to administer the survey and collect responses.
- We recommend a concerted effort by the ASA to update its database of individual members, especially their e-mail addresses and the classification of their employers. A substantial number, almost 7% (334/4933), of addresses were either invalid or missing. The description field in the database provided by the ASA corresponded poorly with that reported by survey responders. Only 85% were in agreement. (See the table below.)

DESCRIPTION FROM ASA MEMBERSHIP LIST by SURVEY QUESTION 10 (RECODED)

		Current Survey Response (Q10)					
		Business and Industry	Federal Government	Private Consultant/ Self Employed	State or Local Government	Other	Total
DESCRIPTION	Business and Industry	894	7	25	6	85	1017
	Federal/National Government	13	304	3	6	22	348
	Private Consultant/Self Employed	41	1	62	2	8	114
	State, Provincial, Local Government	2	3	1	23	3	32
	Other	14	3	1	0	78	96
	Total	964	318	92	37	196	1607

Accuracy = 1361/1607 = 84.7 % (15.3% not in agreement)

V. ACKNOWLEDGEMENTS

The authors gratefully acknowledge the critical input provided by Keith Crank, ASA Assistant Director for Research and Graduate Education, Barry Nussbaum, Chair of SPAIG Committee, and all members of the SPAIG Committee.

We also wish to thank the ASA members who responded to the survey. Without their participation, the survey could not have been conducted. Their valuable comments will surely improve future surveys.

APPENDIX A

2011 American Statistical Association Salary Survey

of Business, Industry, and Government Statisticians

2011 American Statistical Association Salary Survey

1. Welcome to the ASA Salary Survey of Business, Industry, and Government Stat...

Please complete the following information about your background and current primary employment as a statistician. All information will remain strictly confidential and will only be reported as aggregated data.

Your input is very valuable and important to us. Thank you very much for your time in participating in our survey.

*** 1. Please enter your PIN**

2. Survey Questions

For this study, a Statistician is defined as a person who is employed in business, industry, or government (not academia):
1. Has a university/college degree (Bachelors, Masters, PhD) in statistics, biostatistics, or mathematical statistics, OR has the equivalent of one year graduate course work in academic statistics (including Federal Government employees who meet the education requirements for a Mathematical Statistician),
AND
2. Currently uses statistical reasoning or performs statistical analyses (includes supervision of statisticians) as part of their job.

*** 2. Based on the definition above, are you currently employed as a statistician?**

◯ Yes

◯ If No (or Not Sure) please specify

3. Survey Questions

3. What is your highest educational degree completed?

◯ Bachelors Degree ◯ Masters Degree ◯ Doctorate

4. What is your Gender?

◯ Male ◯ Female

5. What is the first date you were ever employed full-time as a statistician? (Could be at a different organization.)

MM DD YYYY

Date ___ / ___ / ____

2011 American Statistical Association Salary Survey

6. Is your current position full-time or part-time?

- ◯ Full-time
- ◯ Part-time, please enter your percentage effort

7. Does your current position include managerial responsibilities? (Managerial responsibilities include budget and hiring responsibility, conducting performance appraisals, etc. A technical team leader is not considered to have managerial responsibility.)

- ◯ Yes
- ◯ No

8. What is the state in which your current job is located (or based)?

State:

* **9. What is your current annual base salary (in dollars) as a business, industry, or government statistician? (Include bonuses, incentives, or other forms of monetary award.)**

10. Which choice best describes your current employer?

- ◯ Federal Government
- ◯ State or Local Government
- ◯ For-Profit Business or Industry
- ◯ Non-Profit Organization
- ◯ Self Employed/Private Consultant
- ◯ Other (please specify)

11. Which choice best describes your current job type or application area?

- ◯ Pharmaceuticals
- ◯ Other Medical/Health-Related
- ◯ General Consulting
- ◯ Other (please specify)

4. Finished

Thank you for completing the survey. Be assured that your responses are completely anonymous.

APPENDIX B
E-Mail Invitation

Dear «FIRST» «MIDDLE» «LAST»:

STAND UP AND BE COUNTED! We statisticians are well aware of the current trend toward decreasing survey response rates that can bias a study's results. Let's practice what we preach and prove that statisticians value high response rates by completing this survey conducted on our very own population of professionals.

Your assistance is requested for the 2011 American Statistical Association (ASA) survey of statisticians in business, industry, government, and non-profit organizations. This research will update similar ASA surveys conducted in the past (see reports at **http://www.amstat.org/careers/salaryinformation.cfm**). Survey results will provide relevant statistician salary benchmarks to ASA members and will be very helpful in addressing the salary/career questions ASA receives from students, employers, and researchers.

You have been selected from ASA membership to be contacted for this survey. The questions are brief and primarily relate to your current employment situation. It should take only 3 or 4 minutes to complete. Your response is very important to an accurate representation of statistics as a career. If you choose to complete the survey on the survey's website please:

Go to: **http://www.surveymonkey.com/asa2011**
Enter this password: **SPAIG11**
Enter this PIN: **«PIN»**

Please note that your assigned password is case sensitive and your PIN is unique. **If you have any difficulty accessing the web survey, please contact Patricia Hall at Georgia Health Sciences University, Biostatistics Consulting and Survey Center at (706) 721-2947 or pathall@georgiahealth.edu.**

Your participation is voluntary; however we encourage you to make this special survey a priority. There will be no penalty or loss of benefits to which you are otherwise entitled should you refuse to answer any question or decide not to participate in the research. Strict security procedures are in place so that your information will be kept confidential. Neither your name nor the name of your firm will be associated with any information you provide. Published data will be summarized by type of organization and geographic region, as well as by academic degree and length of work experience. Contact the Georgia Health Sciences University Office of Human Research Protection at (706)-721-1483 if you have questions or complaints about your rights as a research subject.

Thank you very much for your cooperation.

Sincerely,

Barry Nussbaum, D.Sc., Chair
Statistics Partnership of Academe,
Industry & Government (SPAIG) Committee
American Statistical Association

James Dias, Ph.D., Director
Biostatistics Consulting and Survey Center
Department of Biostatistics
Georgia Health Sciences University

APPENDIX C – Descriptive Statistics

Entire Sample Responding (N = 1615)

Quantitative Variables	Not Missing		Missing		Total	
	N	Percent	N	Percent	N	Percent
Part-Time % Effort	82	5.1%	1533	94.9%	1615	100.0%
Salary (Annualized in Thousands)	1615	100.0%	0	.0%	1615	100.0%
Years Experience	1586	98.2%	29	1.8%	1615	100.0%

Descriptive Statistics for Quantitative Variables

			Statistic
Part-Time % Effort n = 82	Mean		54.20
	95% Confidence Interval for Mean	Lower Bound	49.47
		Upper Bound	58.92
	Median		50.00
	Std. Deviation		21.525
	Minimum		13
	Maximum		90
Salary (Annualized in Thousands) n = 1615	Mean		159.88
	95% Confidence Interval for Mean	Lower Bound	154.33
		Upper Bound	165.43
	Median		138.00
	Std. Deviation		113.680
	Minimum		0
	Maximum		2500
Years Experience n = 1586	Mean		20.44
	95% Confidence Interval for Mean	Lower Bound	19.86
		Upper Bound	21.02
	Median		20.00
	Std. Deviation		11.796
	Minimum		0
	Maximum		66

Quantitative Variables	n	Percentiles				
		10	25	50	75	90
Part-Time % Effort	82	25.00	40.00	50.00	75.00	80.00
Salary (Annualized in Thousands)	1615	87.00	110.00	138.00	176.00	240.00
Years Experience	1586	5.00	11.00	20.00	29.00	35.00

Number Non-Missing and Missing for Categorical Variables

	Full-/Part-Time	Gender	Employer	Highest Degree	Geographic Region	Managerial Responsibility	Application Area or Type of Job	Years Experience
N	1615	1606	1609	1610	1608	1607	1612	1586
# Missing	0	9	6	5	7	8	3	29

Frequency Table for Categorical Variables

		Frequency	Percent
Full-/Part-Time	Full-time	1533	94.9
	Part-time	82	5.1
	Total responded	1615	100.0
	Missing	0	
	Total	1615	
Gender	Female	524	32.6
	Male	1082	67.4
	Total responded	1606	100.0
	Missing	9	
	Total	1615	
Employer	Federal Government	320	19.9
	State or Local Government	37	2.3
	For-Profit Business or Industry	964	59.9
	Non-Profit Organization	172	10.7
	Self Employed or Private Consultant	92	5.7
	Other (please specify)	24	1.5
	Total responded	1609	100.0
	Missing	6	
	Total	1615	
Highest Degree	Bachelors	30	1.9
	Masters	661	41.1
	Doctorate	919	57.1
	Total responded	1610	100.0
	Missing	5	
	Total	1615	

Frequency Table for Categorical Variables (cont.)

		Frequency	Percent
Geographic Region	South Atlantic	538	33.5
	Middle Atlantic	285	17.7
	East North Central	174	10.8
	Pacific	232	14.4
	New England	119	7.4
	West North Central	95	5.9
	Other	165	10.3
	Total responded	1608	100.0
	Missing	7	
	Total	1615	
Managerial Responsibility	No	930	57.9
	Yes	677	42.1
	Total responded	1607	100.0
	Missing	8	
	Total	1615	
Years Experience	0-2	38	2.4
	3-5	134	8.4
	6-10	214	13.5
	11-15	242	15.3
	16-25	407	25.7
	26+	551	34.7
	Total responded	1586	100.0
	Missing	29	
	Total	1615	

Frequency Table for Categorical Variables (cont.)

		n	%
Application Area/ Job Type	Pharmaceuticals	521	32.3
	Other Medical/Health-Care Related	372	23.1
	General Consulting	200	12.4
	Surveys/Marketing	80	5.0
	Banking/Finance/Business	39	2.4
	Environment/Health	31	1.9
	Software	31	1.9
	Wildlife/Forestry/Agriculture	30	1.9
	High Tech/Internet Technology/WWW	14	.9
	Military/Defense/Aerospace	17	1.1
	Natural Resources/Energy	23	1.4
	Engineering/Manufacturing	30	1.9
	Insurance	8	.5
	Education	12	.7
	Consumer Products/Goods	15	.9
	Economics	11	.7
	Telecommunications	8	.5
	Transportation	7	.4
	Other	163	10.1
	Total responded	1612	100.0
	Missing	3	
	Total	1615	

APPENDIX D

Salary (Annualized in Thousands)

			Percentiles				
		n	10	25	50	75	90
Total Sample		1615	87.0	110.0	138.0	176.0	240.0
Employer	Federal Government	320	89.0	105.5	127.0	149.0	162.5
	State or Local Government	37	55.0	72.0	87.0	107.0	185.0
	For-Profit Business or Industry	964	97.0	120.0	150.0	200.0	265.0
	Non-Profit Organization	172	70.0	90.0	120.0	156.0	190.0
	Self Employed or Private Consultant	92	80.0	102.0	150.0	201.5	350.0
	Other (please specify)	24	80.0	97.5	122.5	160.0	171.0
Geographic Region	South Atlantic (DE, DC, GA, FL, MD, NC, SC, VA, WV)	538	91.0	111.0	136.0	160.0	200.0
	Middle Atlantic (NJ, NY, PA)	285	100.0	125.0	163.0	220.0	300.0
	East North Central (IL, IN, MI, OH, WI)	174	80.0	102.0	132.5	180.0	234.0
	Pacific (AK, CA, HI, OR, WA)	232	87.0	105.0	140.0	185.0	260.0
	New England (CT, MA, ME, NH, RI, VT)	119	87.0	117.0	156.0	210.0	300.0
	West North Central (IA, KS, MN, MO, ND, NE, SD)	95	80.0	96.0	120.0	145.0	176.0
	Other (States not listed above)	165	75.0	93.0	121.0	155.0	200.0
Managerial Responsibility	No	930	80.0	100.0	125.5	152.0	197.0
	Yes	677	100.0	128.0	160.0	207.0	285.0
Gender	Female	524	82.0	102.0	126.5	159.5	200.0
	Male	1082	90.0	116.0	145.0	186.0	250.0
Highest Degree	Bachelors	30	54.0	75.0	134.5	156.0	168.0
	Masters	661	77.0	95.0	122.0	155.0	198.0
	Doctorate	919	100.0	122.0	150.0	200.0	285.0

APPENDIX D (cont.)

Salary (Annualized in Thousands)

			Percentiles				
		n	10	25	50	75	90
Years Experience	0-2	38	59.0	75.0	91.0	115.0	150.0
	3-5	134	63.0	79.0	95.5	120.0	145.0
	6-10	214	84.0	96.0	116.5	140.0	162.0
	11-15	242	92.0	111.0	132.0	172.0	215.0
	16-25	407	97.0	120.0	147.0	195.0	250.0
	26+	551	105.0	130.0	158.0	200.0	287.0
Application Area or Type of Job	Pharmaceuticals	521	110.0	130.0	168.0	215.0	300.0
	Other Medical/Health-Related	372	76.0	94.0	120.0	149.0	188.0
	General Consulting	200	88.5	108.0	135.0	170.0	217.5
	Surveys/Marketing	80	92.0	117.0	136.5	159.0	202.5
	Other	439	84.0	102.0	130.0	160.0	220.0

APPENDIX E

Managerial Responsibility by Experience by Highest Degree

Salary (Annualized in Thousands)

Years Experience	Highest Degree[1]	n	Percentiles				
			10	25	50	75	90
No Managerial Responsibility							
0-5	Masters	67	53.0	68.0	80.0	92.0	106.0
	Doctorate	61	79.0	90.0	107.0	124.0	136.0
6-10	Masters	52	76.0	86.0	91.5	115.0	125.0
	Doctorate	92	94.0	107.0	123.0	149.5	162.0
11-15	Masters	72	82.0	91.5	111.0	127.5	150.0
	Doctorate	67	110.0	120.0	134.0	170.0	215.0
16-25	Masters	91	88.0	101.0	122.0	145.0	164.0
	Doctorate	108	105.0	124.0	145.0	170.0	210.0
26+	Masters	109	85.0	115.0	131.0	165.0	191.0
	Doctorate	173	107.0	130.0	150.0	200.0	287.0
Managerial Responsibility							
0-5	Masters	15		61.0	90.0	120.0	
	Doctorate	25	90.0	110.0	130.0	155.0	185.0
6-10	Masters	35	80.0	97.0	115.0	140.0	154.0
	Doctorate	30	99.5	110.0	131.0	175.0	235.0
11-15	Masters	32	92.0	104.5	127.5	163.0	180.0
	Doctorate	66	115.0	135.0	172.0	200.0	260.0
16-25	Masters	86	102.0	123.0	150.0	200.0	250.0
	Doctorate	112	125.0	149.0	188.5	250.0	350.0
26+	Masters	89	99.0	135.0	160.0	190.0	240.0
	Doctorate	161	121.0	152.0	194.0	260.0	400.0

[1]There were too few respondents with a Bachelor's degree to include in this table.

APPENDIX F

Bachelor's Highest Degree

Experience

Salary (Annualized in Thousands)

Years Experience	n	Percentiles		
		25	50	75
0 - 25	16	64.0	94.5	148.5
26+	14	133.0	149.5	156.0
Overall	30	75.0	134.5	156.0

APPENDIX G

Employer by Highest Degree

Salary (Annualized in Thousands)

Employer	Highest Degree	n	Percentiles				
			10	25	50	75	90
Federal Government	Bachelors	12		134.5	151.5	156.0	
	Masters	113	80.0	91.0	115.0	137.0	155.0
	Doctorate	194	98.0	110.0	130.0	150.0	170.0
State or Local Government	Bachelors	1					
	Masters	17		72.0	85.0	99.0	
	Doctorate	19		69.0	98.0	125.0	
For-Profit Business or Industry	Bachelors	10		74.0	112.0	147.0	
	Masters	416	86.0	105.0	130.5	165.0	205.0
	Doctorate	535	110.0	130.0	168.0	224.0	306.0
Non-Profit Organization	Bachelors	5					
	Masters	66	57.0	75.0	87.5	105.0	132.0
	Doctorate	101	104.0	120.0	145.0	175.0	204.0
Self Employed or Private Consultant	Bachelors	1					
	Masters	34	40.0	90.0	122.5	180.0	203.0
	Doctorate	56	85.0	122.5	180.0	250.0	400.0
Other	Bachelors	1					
	Masters	11		95.0	107.0	135.0	
	Doctorate	12		94.0	155.5	163.5	

APPENDIX H - Employer by Application Area or Type of Job by Highest Degree

Salary (Annualized in Thousands)

Employer	Application Area or Type of Job	Highest Degree[1]	n	Percentiles				
				10	25	50	75	90
Federal Government	Pharmaceuticals	Masters	3					
		Doctorate	19		116.0	125.0	149.0	
	Other Medical/ Health-Related	Masters	28	80.0	85.5	97.5	122.0	147.0
		Doctorate	78	96.0	113.0	134.0	153.0	183.0
	General Consulting	Masters	25	80.0	91.0	116.0	135.0	145.0
		Doctorate	20	99.0	112.0	130.0	145.0	156.0
	Surveys/ Marketing	Masters	22	110.0	120.0	136.5	150.0	156.0
		Doctorate	15		110.0	136.0	156.0	
	Other	Masters	34	69.0	90.0	108.0	137.0	156.0
		Doctorate	62	95.0	107.0	129.0	155.0	169.0
For-Profit Business or Industry	Pharmaceuticals	Masters	171	105.0	120.0	148.0	180.0	210.0
		Doctorate	280	124.0	145.0	190.0	250.0	325.0
	Other Medical/ Health-Related	Masters	65	71.0	91.0	117.0	141.0	164.0
		Doctorate	58	95.0	120.0	140.0	200.0	250.0
	General Consulting	Masters	49	83.0	102.0	134.0	160.0	240.0
		Doctorate	48	110.0	128.5	157.5	209.5	315.0
	Surveys/ Marketing	Masters	18	84.0	104.0	127.5	165.0	205.0
		Doctorate	14		125.0	137.5	210.0	
	Other	Masters	113	80.0	96.0	125.0	155.0	193.0
		Doctorate	135	103.0	120.0	148.0	200.0	320.0
Other (State/Local Government, Non-profit Organization, Self Employed, Private Consultant, Other Employers not listed above)	Pharmaceuticals	Masters	10		110.0	135.0	203.0	
		Doctorate	31	110.0	133.0	200.0	400.0	480.0
	Other Medical/ Health-Related	Masters	66	56.0	75.0	87.0	107.0	145.0
		Doctorate	71	89.0	105.0	133.0	159.0	186.0
	General Consulting	Masters	17	33.0	74.0	100.0	125.0	132.0
		Doctorate	32	100.0	120.0	170.0	197.0	200.0
	Surveys/ Marketing	Masters	2					
		Doctorate	5					
	Other	Masters	33	63.0	78.0	91.0	150.0	205.0
		Doctorate	48	67.0	97.0	139.0	167.5	235.0

[1]There were too few respondents with a Bachelor's degree to include in this table.