APEGM 2004 Salary Survey

APEGM Salary Research Committee

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1 Highlights

The Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM) extends a heartfelt thank you to the 965 members who responded to the survey. This document, prepared by the Salary Research Committee of the APEGM, presents survey information on the compensation received by APEGM members (including EITs and GITs) employed in Manitoba. The information is based on data collected from a membership survey and reflects members' salaries as of December 31, 2003. This report provides information of salaries, education, benefits, and the workplace. This report is available at our website: *http://www.apegm.mb.ca/*

1.1 Membership Response

- Invitations to complete the web-based survey were sent to 3112 APEGM members and EIT/GITs resident in Manitoba in April 2004. Responses were accepted until May 25, 2004. The reference date for the survey was December 31, 2003.
- Responses were received from 965 members for an overall response rate of 31%, compared to 31% in 2003, 24% in 2002, 24% in 2001, and 19% in 2000.
- Of the responses, 71% (624/880) were Engineers, 3% (25/880) were Geoscientists, and 26% (231/880) were EIT/GITs.
- The response rate for Engineers was 26.3% (624/2365). The response rate for Geoscientists was 15.6% (25/160). The response rate for EIT/GITs was 39.4% (231/587).
- This year, 25% (58) of the (231) respondents who were EIT/GITs graduated more than 5 years ago.
- This year was the second year that the APEGM used a web-based survey.

1.2 Salary

The primary purpose of the salary survey is to report base salary information as a function of job ratings. Jobs are rated using the APEGM Job Classification Rating Guide, which provides typical job ratings of 140 for a recent Engineering graduate, 320 for a Design Engineer, 480 for a Senior Design Engineer, and 715 for a Division Executive for a large corporation.

1.3 Exclusions

Although 965 members logged in to the survey, difficulties with the online format resulted in not all the questions being completed. As a result, the number of respondents used in each separate table and chart varies.

For base salary calculations, responses were excluded for several reasons. First, some (16) surveys did not include a base salary. Second, some (22) surveys were excluded from some calculations because the respondent was not a full-time or contract employee. Third, statistical processes required the removal of outlier values for base salary calculations. The following equations were used to determine an upper cut off and a lower cut off point for base salary:

$$
\begin{array}{lll}
BSC_{Upper} = UQ + 3 * IQR & BSC & = \text{Base Salary Cut Off} \\
BSC_{Lower} = LQ - 3 * IQR & UQ & = \text{Upper Quartile} \\
IQR = UQ - LQ & LQ & = \text{Lower Quartile} \\
 & IQR & = \text{Inter-Quartile Range}
\end{array}
$$

The upper cut off salary was determined to be $171000. The lower cut off was negative in magnitude and thus did not apply. A total number of 9 respondents exceeded the upper cut off salary and were thus excluded from further base salary analyses. Additionally, 2 responses were excluded because their point totals were unreasonably high or low. As a result, 831 responses were used for the base salary versus APEGM points, and base salary analyses versus year of graduation plots. The total numbers of responses are indicated in the base salary tables for other criteria.

1.4 Comparison With Other Provinces

Figure 6 and 18 provide a comparison of the 2003 APEGM salary data with the most recent salary data available from British Columbia, Alberta, Saskatchewan, and Ontario. Caution should be exercised with comparisons due to the subjective manner in which equivalent points ranges were matched. Values from British Columbia were adjusted from the original values of total income reported in that provinces salary survey report using the percentage difference of total income over base annual salary found in that same survey report. Salary survey information for other provinces can be found at: *www.apeg.bc.ca*, *www.apegga.com*, *www.apegs.sk.ca*, and *www.peo.on.ca*.

1.5 Education

- Of the respondents, 21% (186/880) indicated that they had obtained a postgraduate degree.
- By membership category, this equates to 24% (149/624) of Engineers, 44% (11/25) of Geoscientists, and 11% (26/231) of EIT/GITs.
- 90.9% of respondents indicated their first degree in Engineering or Geoscience was from a Canadian university.

1.6 Gender

- Overall, 88% (773/880) of respondents were male and 12% (107/880) were female.
- Of the 880 respondents, 61% (450/773) of the males graduated after 1985, and 93% (99/107) of the females graduated after 1985.

1.7 Workplace Information

- The average official workweek was 38.4 hours.
- The typical number of hours worked was 43.2 hours.
- The average number of weeks of vacation reported was 3.8.
- The average respondent has been with their current employer for 9.0 years.
- This year, 63% of respondents were from the private sector, compared to 62% last year, and 65% the year before last.

1.8 Comments

- This year, 11% provided written comments on their APEGM Salary Survey, compared with 13% who left comments in 2003, and 7% in the 2002 survey.
- In the comments, 26% commented on the survey format, 35% commented on the web format of the survey, 15% commented on their personal results, 11% commented on the activities of APEGM, 5% commented on the engineering profession, and 8% made general comments.

2 Comments in Detail

The following comments and feedback from survey respondents are reprinted as received. Comments have not been edited, and as such do not necessarily reflect the views of the APEGM.

2.1 Survey Format (Positive)

- The survey was well constructed and included all aspects of the job.
- This is a good tool for new grads to see their earning potential. I appreciate knowing average salary of my colleagues and realize how I am contributing to the low end of the scale.
- This is a good format for the survey. It took me about 15 minutes.

2.2 Survey Format (Changes)

- We are interested in comparitive assessments between technologist and Engineering graduates across similar industries.

- Perhaps it should be asked if the employee feels that the salary is fair and appropriate for the work done. I think there is a qualitative aspect to this information that isn't captured on this survey. For my current position, I think this is a fair salary, however, 6 months ago I would have given a different answer. I had similar working hours, yet the pressure and stress associated with that job made the salary completely inadequate. In that position, I did not have time to take coffee breaks or lunch breaks if I hoped to leave the office on time to meet my personal obligations.

- Responses provided as at December 2003. Was permanently laid off mid-January 2004 due to corporate restructuring. There could be a section on job security issues or number of employer changes in a certain number of months/years. Could also add something about parental leave - does the employer supplement benefits or discourage absence.

- Not clear if questions pertain to 2003 or to 2004. If a person has not had a change over the timeframe it is irrelevant, but for myself it was very significant.

- The survey questions are difficult to apply to my personal situation (i.e. teaching electronics and computer technology students). Although I work independently, with large scope of decision making, it is somehow difficult to fit the description of my duties into the classification categories of the survey, which seem to be largely derived from engineering positions within an industrial corporation model.

- I work in electronics manufacturing. For the industry sector question, I was not sure whether to choose "electronics" or "production." Production is so broad that it would cover many others in the list as well, so perhaps it should not be in the list as it may skew the results. In the supervisory question, the guide doesn't really address the supervision of production staff. Many engineers oversee the work of production workers and are responsible for their output, but they are not direct reports. Hope my feedback is useful.

- I object to the wording of the section on decisions. Particularly "Routinely make technical decisions", "Routinely make responsible decisions", "Routinely make responsible technical/administrative decisions". I am appaled that APEGM would present a question where I would have to choose between a technical decision and a responsible decision. I have NEVER made a technical desision that I would not also consider to be a responsible decision. Then, to reinforce your position you add responsible technical/admistrative decision I can only conclude that APEGM considers pure technical decisions to be made irresonsibly. I know this is not what is intended, but surely you can devise more appropriate wording!

- Enhance this survey program to include backward and forward functions so that adjustments in responses could be made as one goes along. Seems to me that too little credit is given for use of the seal. The seal is what the public sees and perceives as the culmination of what the engineers do. The seal represents the taking on of the responsibility for the design along with the associated liability. We, as the more experienced engineers, are the collective group who prepare surveys such as this one and assign the work we do to greater importance (read self importance) and assign the "real" engineers to this role that we arbitrarily deem of lesser importance.

- I am having problem to determine the actual rating if I falls under a category with a range. What would be the tendency of rating? Top of the scale or middle of the scale?

- Most employees get a raise at the end or beginning of year. Would it not be better to take the survey as of June 30 to keep away from potential issues as to which income to report (last year's or this year's)?

- include last year's survey so we can compare what we said last time. or let us edit the previous report, usually only minor changes
- You might want to consider putting all of Manitoba as a workplace choice, rather than north or south. My work has been divided equally in both north and south Manitoba for a second year in a row.
- Although you request salary effective for year ending Dec 31 2003, I feel this may be out of date since you are taking the survey in May 2004 and the report comes out later in 2004. I received a salary increase effective January 1 2004, so I am not sure if I should be putting down my current year salary or last year's salary. I recognize that some consultants may not work on an annual salary basis and this may be the reason for asking for last year's information. If this is the case, the final Salary Survey report should clearly indicate that the salaries being analyzed are 2003 salaries and not 2004 salaries. This has an impact if one uses the survey results to compare their current salary (i.e. 2004 level) to that presented in the report (2003 level). The comparison would then actually be one year out of sync.
- It is still not clear for which period you want the salary information stated. At the beginning it states salary information for period ending Dec 2003. However, the form asks for salary for the period starting Dec. 31, 2003. Which means the salary for the period Jan. to Dec. 2004. contradicting the opening heading. I have always had a problem identifying which period the salary information is required for. Please try to remove any confusion. Also please state clearly in the final report for which period the salary information pertains to i.e. Jan 1 to Dec. 31 2003 or Jan 1 to Dec. 31 2004
- The fields under "education" are a little short. There may be benefits such as transportation or accomodation, that do not show under "income". There may be valuable non-engineering skills also used in an engineering job, such as "pilot" of plane or ship. Physical capabilities may be required of certain engineering inspectors (such as high climbing)
- The survey assumes that the first Bachelor degree is in Engineering. This is not necessarily accurate.
- Other survey questions should include: job satisfaction, Opportunities for professional development, Job security, Number of Hours in Community involvment. I think this would be interesting data to collect on top of the previous survey.
- Allow a longer time period in which to complete the survey. Provide an offline method of completing the survey, for example a program that can be emailed out, filled out and a results file emailed back.
- I'm not comfortable that every window of the survey must be filled out to go onto the next question–I believe it is my right to not answer that I'm uncomfortable answering. This will be the last survey I fill out unless the format changes.
- I found section C difficult to answer. This seems to directed to large companies with the luxury of being able to afford specialists. I work for a small agency supplying technical products to many markets including communications power and mining. In many of the smaller companies we often run into engineers who are jack of all trades because they generally may be the only engineer on staff. I think this section might be better served by adding a second column with the original column headed 'Primary function(s)' and the new column as 'Other responsibilities'. You might get a truer picture of everyone's daily responsibilities in today's marketplace.
- I think that if you are going to make this survey manditory and I'm assuming it is as I've been reminded of it once a week for I don't know how long that you should make it a lot quicker and user freindly. Thank You.

- Great job. Keep it up. Are we expected to answer the questions based on today (May 2004) and compare them against our salary for December 2003? If so - it should be clearly noted in the survey. As well - the final report should recognize the fact that several companies hold their 'year-ends' within this lag time, meaning significant salary and benefit changes. However - other companies may have their 'year-ends' later on. This inconsistency could be fixed by stating a clear comparison date (December 31, 2003) and that all questions would be answered based on that date.
- Better align points between survey and ratings guide descriptions as some descriptions in the ratings guide seem to have different point values than indicated on the short description in this survey.

2.3 Web Format (Positive)

- This is an improvement from the past paper survey's.
- The survey is well laid out and quite easy to complete on line.
- Very easy to use. Thanks
- The online survey is superior to the old paper-based survey. Thank you.
- This survey crashed when I was on point "I" or perhaps the question before. When I logged in to complete the survey, it automatically began with point "I." It is good that at the end of the survey, I was able to look over my responses prior to this question.
- Thanks for including a method to print out the completed survey.
- Much better & quicker method for the annual survey
- This web based survey is much better than the old paper version.
- Very user friendly survey.
- Excellent idea to make the survey paperless! Keep up the good work!
- Good Survey. Very fast.
- I like the web-based format.

2.4 Web Format (Changes)

- My income for 2003 was 30% Less than 2002 but I was unable to indicate a decrease in income from the previous year.
- Some of your questions that allow only one answer don't work very well. I work in a job that touches many sectors, my job also involves more than one task, and is equally split between design and project management.
- Could the survey form not be more continuous, as opposed to the present format of having to submit each individual question separately?
- if is it possible to generate a summary esp. the point section?
- suggest a correction/delete option be provided, presently have to go back one question - some indicator about how far along the survey one is e.g. 25% or 45% complete etc.

- A question about drug plan could be added to your survey.
- The website is easy to navigate, however it is very slow. It might be easier to have more than section per page and only have to click the submit button a couple of times. Note: I am using a LAN line and it is still slow.
- After each question the term "submit" should be changed to "next" or "continue"
- I could not put a negative number on the change in salary question
- I have dropped in my salary 16% down from year 2002. It should show -16%. I could not insert (-) to this survey. It not allowed me to perform this function.
- Points ranking system was strange. Survey is poorly laid out. Missing leading zero's in email resulted in login not working.
- (1)Principal Job Function does not allow multiple entries. Single function is OK for large companies. Personnel in smaller companies do multiple functions. (2)Length of Typical work week does not allow use of stated Option "NA" and demands a numeric value.
- Links to guide did not work. Typing does not show on screen, even as I type this Web site needs to be pixed
- In a couple of questions, I could have selected more than 1 answer
- Percent change in base salary question did not allow entry of a negative number. In 2003 I took a lower paying job to reduce workload and responsibilty. Thanks
- Question says to answer with N/A and if you do, error comes back that answer must be numeric!
- In section B) Work Week, I found the field to be formatted such that it would only accept xx.x hours per week rather than the xx.xx format of the examples given. The consequence was that I reported 37.8 hours per week rather than my desired reply of 37.75 hours per week.
- The answer box should be able to take longer responses.
- Ensure all survey options work. NA on work week hours wasn't accepted.
- the Summary should come up automatically and may also provide the YTD summary of the survey.
- Put more questions on the same web page so that the respondent doesn't have to submit (and subsequently wait) after each question.
- The survey took longer than necessary because the web based forms were quite slow at times.
- On the hours of work form you show 2 decimals but the program only accepts one. The program seems terribly slow to move ahead after submitting each screen.

2.5 Personal Results

- Although not a direct supervisory position I provide technical guidance to 8 technicians. I am in a salaried position and as such, many technicians see me in a managing role.
- I wasn't sure about absence from my base. I work underground 1-5 days per week, away from my desk.
- My regular AECL employment was terminated on June 10, 2003 due to reduction in funding. The salary reported in this survey had covered my employment for the period January 01 to June 09, 2004. I had exercised my option to retire and receive pension as a result of this change. I am now self-employed looking for consulting jobs. No luck so-far.
- Currently a graduate student in the United States
- Did my best to identify my job description.
- I am retired and performing limited amounts of consulting services for a former employer. Under these circumstances it is difficult to complete the survey or indeed to rate myself. Thus the info provided should be taken with a grain of salt particularily when comparing same to other professionals.
- I have two degrees and I am doing a Master's degree part time. Education and salary are not complementary of each other.
- I have provided answers based on my employment status on Dec. 31 2003 since that was the date requested for salary info. Since then I have left that position so my responses would be significantly different for my employment at the present time. Hope this is OK
- I find my work very challenging and exciting. I am happy with my work but feel that I am underpaid (with respect to the rest of Canada) and under-appreciated for the level of responsibility that I have.
- The salary quoted is as of March 31 2003. The union is negotiating new contract new contract with the province.
- Most of the questions are not directly applicable to me. I am in charge of operators running 5 sewer systems and 2 water plants. I also am involved in drainage road construction GPS operation subdivisions etc. All a wide variety of the day to day operations of a rural municipality. Therefore the questions where you may only pick one answer do not adequately cover my working requirements.
- I found it difficult to categorize my work as a provincial regulator - not design or planning, but technical review of designs preparation of technical guidelines, etc.
- I am a master's student with a part time job as a Health Care Aid and worked part time as a Teaching Assistant in Biosystem's Engineering. I have answered the questions but what I am doing and what you asked do not fit. I am experiencing difficulty in finding full time engineering works.
- I recently moved back from Alberta to Manitoba and the pay decrease was over 20% for the same levels of responsibility, etc. This is discouraging for Engineers.
- For members whose job entails travelling for extended periods and constantly, some leway in submitting reports, maybe yearly. Hard to obtain service points for volunteer work when you are never around long enough for family and personal commitments to volunteer for limited "approved" service.

2.6 APEGM

- I consider the requirement to acquire public service points when working towards professional certification to be demeaning.
- I think the Declaration of Compliance we are now requested to complete annually is unnecessary and redundant. Members of our organization are already obligated under the bylaws and code of ethics to maintain proficiency in our fields of endeavour. I don't think the DOC is going to raise our collective level of competency. But it certainly does add unnecessary bureaucracy to the administration of the organization.
- APEGM should restrict enrollement in Engineering or the EIT program in order to boost demand and salaries. The market is oversaturated with Engineers.
- Quadruple the membership fees to ensure that all members enjoy a similar status and salary as doctors and lawyers. The level of responsibility taken on should be reflected in compensation. Compensation levels have to be standardized across the province.
- APEGM should offer remuneration (or discounts on professional dues) to supervisors that have to complete EIT progress reports. These reports can be time consuming especially for a supervisor with more than one report to complete in every six month period.
- Association should do more to protect designation that members expended effort to obtain and expend effort to maintain.
- Grow up and realize that there is a difference between an engineer and a Professional Engineer. It's nice to be working in the States where this isn't a problem. Try and find a better use for my dues than reading classified adds and hassling people. Your "provincial" attitudes are not making the public any safer and just harming the business climate. I have no problem with you focusing on regulating who is stamping off drawings (i.e. doing what you are supposed to be doing).
- The EIT program is the biggest hassle for me. It is especially difficult to get reports in on time without losing months of service with the amount of work I'm already doing. The program is a case of general overkill, from the reports to the service time to the volunteer hours.
- For members whose job entails travelling for extended periods and constantly, some leway in submitting reports, maybe yearly. Hard to obtain service points for volunteer work when you are never around long enough for family and personal commitments to volunteer for limited "approved" service.
- Reduce the membership fee please.
- The APEGM is clearly not upholding the Act provisions that ensure that engineering works are only conducted by engineers in Manitoba. I have reported this repeatedly to our president. Gladly this has not lead to any fatalities that I'm aware of. However, the financial waste that is on-going in Manitoba due to lack of engineering involvement on engineerings works is staggering and is ultimately a heavy burden to the Manitoba tax-payer.

2.7 Engineering and Geoscientist Profession

- In general, it seems to me that design engineers are not adequately compensated, particularly compared to other professions, and considering the professional risk that one accepts in sealing drawings, and the time frame to which the professional responsibility extends. I would not recommend it as a career.
- Current salaries continue to lose ground against Ontario, Quebec, Alberta and British Columbia engineers of similar experience. Although the cost of living is lower in Manitoba. local employers have used this to conveniently maintain lower wages for profesionals. Combined with the limited employment opportunities in the aerospace sector. it should not be a surprise to employers when engineers decide to leave for other provinces or the US. The combination of better opportunities and competitive salaries in other provinces will continue to sustain this occurence.
- As a group, engineers need to be paid more money. Plain and simple.
- Salaries must be fair and equitable across all of Canada. The cost of living argument for setting engineering salaries in any Province is irrelevant and should not be considered. Renumeration/salaries for engineering services should be based on a National Scale
- I find that engineers are not paid enough for what they are expected to do and the responsibilies they take on.

2.8 General

- I appreciate being able to do this over the internet although getting around to it was a pain. Thanks for setting it up this way. I wonder if our weighting of the different areas isn't a little out to lunch. The value for overseeing 200 people seems ridiculously low compared to other categories. I think that the weighting should be rethought for the future. That could be done by separate factors for each section so that you could still reuse the format and data from previous years. It could even be hidden from view and presented as a separate table so that the weighting could be varied over time as our work culture changed.
- The development of "points" in the survey does not take into sufficient consideration the application of specialized knowledge and experience at a high level of proficiency but rather focuses more on the management of people and organizations at the higher end of the scale. Both should be accounted for. For example, a CEO or manager of a large group of people may not be applying technical knowledge to nearly the same extent as a specialist or highly experienced person who is sought out for that expertise and who may be compensated at a rate comparable to the manager.
- Is the value of a solitary very experienced researcher greater than that of a supervisor in a small department? This is not clear in the points, but mention is made of the tech/R&D path in work done. This is an age-old question, with no clear answer.
- too many points awarded for the number of people one supervises. SHould be a separate category for technical level of expertise like patents (international, national), publications (books, texts, papers)), and recognition in the technical community (regualry a chair of IEEE, etc)
- Your Salary data does not fit for people who are part owners and are paid out of what is left over.
- please update the server speed. it took me 45 min to do this survey.

- Some of the talks look interesting but they are all in Winnipeg and therefore all at inconvenient times (morning luncheons).
- This is good exercise

Table 1: Mean Base Salary Vs. APEGM Points Equations

Year	Base Salary
2004	$89P + 22.7k$
2003	$85P + 24.1k$
2002	$86P + 22.2k$
2001	$84P + 20.6k$
2000	$89P + 18.2k$
1999	$93P + 14.6k$
1998	$87P + 17.0k$
1996	$84P + 15.7k$
1995	$96P + 11.8k$

Table 2: Base Salary at Different APEGM Point Levels (Based on Mean Base Salary Equations)

Year of Report	Mean Base Salary @ 200 Pts.	% Incr.	Mean Base Salary @ 400 Pts.	% Incr.	Mean Base Salary @ 600 Pts.	% Incr.	Cost of Living % Increase
2004	40,500	−1.5	58,300	0.3	76,100	1.3	0.8
2003	41,123	4.3	58,123	2.6	75,123	1.8	3.7
2002	39,426	5.3	56,626	4.5	73,826	4.0	3.2
2001	37,413	3.9	54,213	0.8	71,013	−0.8	2.5
2000	36,000	8.4	53,800	3.9	71,600	1.7	2.3
1999	33,200	−3.5	51,800	0.0	70,400	1.7	1.4
1998	34,400	5.8	51,800	5.1	69,200	4.7	1.2
1996	32,500	4.8	49,300	−1.8	66,100	−4.8	1.9
1995	31,000	−3.1	50,200	2.9	69,400	5.8	3.0

Table 3: Industry Sector Statistics

Industry Sector	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
Aerospace	61	7.6	63299	50000	61000	72000	66691	458
Agriculture/Equipment	13	1.6	58901	42818	62000	68000	59732	451
Agriculture/Food	15	1.9	73153	50000	65000	80000	78447	497
Biomedical	1	0.1	45000	NA	NA	NA	48000	280
Chemical	6	0.7	75309	55000	65500	100000	81412	575
Communications	30	3.7	74537	64000	73000	84000	79387	496
Computer/Software	11	1.3	66121	55000	64000	78000	69031	510
Construction	50	6.2	69593	52000	70000	80000	77522	566
Consulting	142	17.6	61407	42000	53000	78000	65199	468
Electronics	19	2.4	59345	48759	57860	60770	60341	440
Health Care	8	1.0	67448	52680	61000	78000	69988	524
Heavy Electrical	15	1.9	66297	48000	67000	72000	67927	460
Manufacturing	74	9.2	57750	43000	52000	70000	61159	448
Mechanical Equipment	10	1.2	56880	46125	54800	68000	61093	433
Metals - Fabricating	8	1.0	63088	40000	46307	87500	64088	517
Metals - Primary	4	0.5	65200	44000	57500	67300	69650	402
Mineral Exploration	8	1.0	70660	65000	69000	70000	70660	635
Mining	29	3.6	78259	57600	75180	96000	85121	543
Other	85	10.5	62975	49000	62000	70000	65967	486
Petroleum	5	0.6	57568	33500	54157	62000	57568	491
Pharmaceutical	9	1.1	53228	43750	47600	63000	55644	381
Research & Development	9	1.1	79456	61500	80000	86500	84562	529
Transportation	47	5.8	64719	48000	64000	77000	68143	525
Transportation Equipment	7	0.9	72083	55000	58000	65000	76857	511
Utilities (Gas,Hydro,Water)	140	17.4	76014	60000	78928	89830	80217	478
Total	806	100						

Table 4: Industry Sector Statistics (Engineers)

Industry Sector	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
Aerospace	37	6.5	72049	60000	68000	78333	76748	533
Agriculture/Equipment	8	1.4	65375	57600	63400	68000	65850	527
Agriculture/Food	10	1.8	85780	65000	76350	97850	93340	586
Chemical	4	0.7	87714	65500	85356	100000	95368	708
Communications	25	4.4	76804	67189	74500	84000	82345	524
Computer/Software	8	1.4	65967	55000	62000	75000	66967	482
Construction	47	8.2	71014	58000	70000	80000	78953	575
Consulting	95	16.7	71743	52000	67980	85000	76281	567
Electronics	11	1.9	67623	57860	60000	73000	68822	519
Health Care	7	1.2	69557	58000	67000	78000	71129	562
Heavy Electrical	12	2.1	71854	59400	68000	72000	73892	505
Manufacturing	38	6.7	69047	52500	67500	76600	74497	552
Mechanical Equipment	8	1.4	60834	54072	55000	68000	66100	473
Metals - Fabricating	5	0.9	76480	46000	87500	92500	78080	641
Metals - Primary	3	0.5	72267	57500	67300	92000	77200	460
Mineral Exploration	1	0.2	111000	NA	NA	NA	111000	718
Mining	19	3.3	86901	75000	80000	100000	95469	612
Other	61	10.7	69227	58000	66690	76944	72874	551
Petroleum	2	0.4	69091	NA	NA	NA	69091	570
Pharmaceutical	5	0.9	60800	45000	63000	66000	63200	457
Research & Development	5	0.9	83407	52000	80000	85864	91367	534
Transportation	40	7.0	68447	55000	65000	78754	71958	565
Transportation Equipment	5	0.9	80000	57000	65000	70000	86000	593
Utilities (Gas,Hydro,Water)	113	19.9	82139	70362	82000	90000	86594	526
Total	569	100						

Table 5: Industry Sector Statistics (Geoscientists)

Industry Sector	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
Consulting	2	10.5	57500	NA	NA	NA	64000	505
Mineral Exploration	7	36.8	64897	65000	69000	70000	64897	623
Mining	3	15.8	83393	75000	75180	100000	89000	650
Other	2	10.5	62039	NA	NA	NA	62039	587
Petroleum	2	10.5	58079	NA	NA	NA	58079	488
Research & Development	3	15.8	78855	67066	83000	86500	80908	561
Total	19	100						

Table 6: Industry Sector Statistics (EIT/GITs)

Industry Sector	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
Aerospace	24	11.0	49810	42815	46000	52000	51187	342
Agriculture/Equipment	5	2.3	48544	42000	42818	43300	49944	331
Agriculture/Food	5	2.3	47900	40000	50000	52500	48660	320
Biomedical	1	0.5	45000	NA	NA	NA	48000	280
Chemical	2	0.9	50500	NA	NA	NA	53500	309
Communications	5	2.3	63200	50000	61000	62000	64600	356
Computer/Software	3	1.4	66533	49000	72600	78000	74533	585
Construction	3	1.4	47333	40000	42000	60000	55100	412
Consulting	45	20.6	39761	35000	40000	43000	41856	259
Electronics	8	3.7	47963	40500	43575	55000	48679	332
Health Care	1	0.5	52680	NA	NA	NA	62000	255
Heavy Electrical	3	1.4	44067	40000	44200	48000	44067	282
Manufacturing	36	16.5	45826	37500	44500	49680	47080	337
Mechanical Equipment	2	0.9	41063	NA	NA	NA	41063	274
Metals - Fabricating	3	1.4	40769	36000	40000	46307	40769	310
Metals - Primary	1	0.5	44000	NA	NA	NA	47000	229
Mining	7	3.2	52603	46000	51900	53300	55370	308
Other	22	10.1	45725	39400	45000	54100	47173	298
Petroleum	1	0.5	33500	NA	NA	NA	33500	340
Pharmaceutical	4	1.8	43763	38000	43750	45700	46200	287
Research & Development	1	0.5	61500	NA	NA	NA	61500	410
Transportation	7	3.2	43412	40000	41885	46000	46343	299
Transportation Equipment	2	0.9	52291	NA	NA	NA	54000	308
Utilities (Gas,Hydro,Water)	27	12.4	50380	45000	50000	54000	53527	274
Total	218	100						

Table 7: Job Function Statistics

Principal Job Function	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
Administrative Services	9	1.1	77176	50000	78928	89655	78620	563
Computer Services	6	0.7	63000	53680	58463	70000	65726	456
Consulting	73	9.1	62008	46000	60000	72600	65739	466
Design	177	22.0	56604	43000	52500	69500	59366	391
Maintenance/Technical Support	56	6.9	64657	49223	62000	78754	71306	444
Management	140	17.4	85869	70000	85000	100000	92567	681
Marketing/Sales	22	2.7	69015	57500	70000	80000	80203	496
Mineral Exploration	4	0.5	59320	30000	68280	69000	59708	541
Other	40	5.0	64201	48000	62400	78000	65969	440
Planning	39	4.8	66813	57600	66000	74998	70001	421
Production	34	4.2	58548	45000	55000	70000	60078	395
Project Management	135	16.7	64844	52650	64000	80000	67770	491
Quality Assurance	15	1.9	62603	50000	58848	69102	64099	465
Research & Development	32	4.0	69648	45000	59000	84000	72127	466
Software Development	18	2.2	59461	52000	57860	67500	61653	432
Teaching	6	0.7	56500	57000	58000	58500	57333	499
Total	806	100						

Table 8: Year of Graduation Statistics

Year of Graduation	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
1960-64	11	1.4	78626	65000	82000	90000	87657	621
1965-69	22	2.7	82264	69878	81400	97000	89855	690
1970	15	1.9	90833	73000	91000	103000	97896	645
1971	9	1.1	95315	83000	90000	98134	101697	713
1972	10	1.2	71099	60000	68000	80000	72803	633
1973	21	2.6	84748	72000	82800	96000	87772	608
1974	17	2.1	86677	74100	88000	92000	91030	644
1975	10	1.2	85344	75000	86000	90000	86644	623
1976	16	2.0	78066	68845	74100	85864	80066	607
1977	15	1.9	87641	73000	81300	100000	94079	662
1978	10	1.2	74779	72600	75972	83000	76701	596
1979	14	1.7	89924	74747	83000	95000	97924	675
1980	24	3.0	84162	64000	75000	100000	93362	657
1981	14	1.7	78633	65000	78928	90000	78985	593
1982	18	2.2	73988	65000	78333	85000	82215	599
1983	22	2.7	78705	67000	79173	92500	82427	635
1984	18	2.2	74654	67189	76944	84000	78894	580
1985	21	2.6	75388	63700	72000	80000	79729	558
1986	24	3.0	73035	61000	70000	83430	80873	542
1987	16	2.0	72815	65800	67066	82000	75586	553
1988	20	2.5	75915	62000	73300	80000	77990	511
1989	19	2.4	77364	63400	77000	89621	80966	555
1990	25	3.1	72515	58838	70000	80000	77537	534
1991	16	2.0	70309	63000	70000	75500	77734	531
1992	23	2.9	71611	63604	68000	77216	76412	500
1993	15	1.9	76689	60000	72000	89000	85676	575
1994	34	4.2	61095	52000	60000	70000	62970	454
1995	37	4.6	59567	48000	60000	67900	62095	418
1996	27	3.3	56262	48000	55000	64000	60129	414
1997	27	3.3	55473	46300	55000	60000	57438	374
1998	37	4.6	53234	45700	51000	61000	56429	387
1999	43	5.3	52896	45000	52000	59000	55015	348
2000	42	5.2	47943	42000	26000	55000	49507	320
2001	37	4.6	45283	40000	43000	51000	46625	291
2002	44	5.5	43802	38000	42815	49000	46346	262
2003-04	33	4.1	39926	36000	40000	45000	42144	261
Total	806	100						

Table 9: Year of Graduation Statistics (Engineers)

Year of Graduation	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
1960-64	10	1.8	83488	65000	82000	91620	93422	609
1965-69	20	3.5	83586	70000	82000	97000	91936	699
1970	15	2.6	90833	73000	91000	103000	97896	645
1971	8	1.4	96569	83000	90000	98134	103750	700
1972	10	1.8	71099	60000	68000	80000	72803	633
1973	21	3.7	84748	72000	82800	96000	87772	608
1974	17	3.0	86677	74100	88000	92000	91030	644
1975	9	1.6	85216	69990	86000	90000	86660	631
1976	14	2.5	79218	68845	75000	87000	81504	617
1977	15	2.6	87641	73000	81300	100000	94079	662
1978	9	1.6	73866	54800	75972	82000	76002	597
1979	13	2.3	91841	74747	85356	95000	10046	689
1980	23	4.0	85339	66914	78000	100000	94678	660
1981	13	2.3	76989	65000	78928	85000	77369	577
1982	18	3.2	73988	65000	78333	85000	82215	598
1983	21	3.7	80458	67000	82000	92500	83924	648
1984	16	2.8	76048	68500	78000	84000	80818	571
1985	20	3.5	75972	68000	72000	80000	80416	565
1986	24	4.2	73035	61000	70000	83430	80873	542
1987	13	2.3	72907	59400	67000	83500	74549	550
1988	17	3.0	77429	62000	73300	80000	79871	509
1989	19	3.3	77364	63400	77000	89621	80966	554
1990	24	4.2	73620	60000	70000	80000	78518	537
1991	15	2.6	71869	64000	74311	75500	79729	538
1992	23	4.0	71611	63604	68000	75000	76412	500
1993	14	2.5	78238	68000	72000	90600	87867	576
1994	31	5.4	62281	52800	62000	70000	63902	471
1995	25	4.4	61840	51000	62000	68000	65027	439
1996	18	3.2	57022	48000	55000	64300	59860	425
1997	21	3.7	56621	46300	57500	62000	59147	395
1998	20	3.5	56710	50000	53000	62000	61400	397
1999	26	4.6	55181	49900	54072	60000	57680	350
2000	6	1.1	50545	42000	45000	55770	52295	380
Total	569	100						

Table 10: Year of Graduation Statistics (Geoscientists)

Year of Graduation	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
1960-69	3	15.8	NA	NA	NA	56026	56026	643
1970-79	6	31.6	70000	70000	85277	76630	76630	587
1980-89	7	36.8	65000	70000	75000	73464	76747	624
1990-99	3	15.8	NA	NA	NA	51386	55719	446
Total	19	100						

Table 11: Year of Graduation Statistics (EIT/GITs)

Year of Graduation	# Reported	%	Mean Base Salary	Lower Quartile	Median	Upper Quartile	Mean Total Income	Mean Points
1980-94	10	4.6	53407	46000	52000	57500	57388	408
1995	11	5.0	54891	43500	48900	60000	56150	379
1996	8	3.7	55959	48000	53000	62400	61000	388
1997	6	2.8	51458	41000	51000	55000	51458	301
1998	17	7.8	49144	44500	48000	50000	50580	375
1999	17	7.8	49400	43000	45000	56500	50939	345
2000	36	16.5	47509	40300	46000	54624	49042	310
2001	37	17.0	45283	40000	43000	51000	46625	291
2002	44	20.2	43802	38000	42815	49000	46346	262
2003-04	32	14.7	39612	36000	40000	44000	41898	258
Total	218	100						

Table 12: Average Base Salary for Post Graduate or Other Supplemental Education

Education:	Respondents:	Mean Base Salary:	Mean APEGM Points:
One Engineering Degree Only	446	63906	465
Supplemental Education:			
Diploma or Other	127	66445	491
M.Eng. or M.Sc.	123	69349	511
2nd B.Sc. (Eng. or Other)	64	66945	500
Multiple Supplemental Categories	22	71631	550
Ph.D.	21	77983	580
MBA	16	78549	571
Multiple Supplemental Categories (Incl. MBA)	12	81405	671
Total	831		

Table 13: Paid Benefits

Benefit	Employer Pays	Shared Cost	Employee Pays or NA
Life Insurance	26.9%	48.6%	24.5%
Pension Plan	14.0%	59.4%	26.6%
Short Term Disability	45.2%	34.8%	20.0%
Long Term Disability	38.3%	39.0%	22.7%
Medical Plan	37.7%	47.8%	14.5%
Dental Plan	35.9%	52.4%	11.7%
RRSP	3.4%	23.8%	72.8%
Stock Purchase	1.6%	9.0%	89.4%
Vehicle	8.4%	9.1%	82.5%
Liability Insurance	38.2%	5.3%	56.5%
Day Care	0.6%	0.3%	99.1%
Continuing Education	41.8%	26.3%	31.9%
Training	65.5%	13.0%	21.5%
APEGM Dues	60.3%	3.3%	36.4%
Technical Society Dues	38.6%	3.8%	57.6%

Table 14: Employment Benefits

Benefit	Employer Provides	Does Not Provide or NA
Savings Plan	20.6%	79.4%
Profit Sharing	25.8%	74.2%
Productivity Incentive	17.4%	82.6%
Leave of Absence	66.6%	33.4%
Flexible Work Hours	69.1%	30.9%
Job Sharing	19.8%	80.2%

Table 15: Average Classification Rating Results

Classification Rating	All	Engineers	Geoscientists	EIT/GITs
A - Duties	94	114	125	36
B - Education	69	69	77	67
C - Experience	95	111	122	48
D - Recommendations	107	118	114	75
E - Supervision Received	71	76	84	55
F - Leadership Authority	32	39	48	11
G - Supervision Scope	8	10	8	4
H - Use of Seal	7	9	5	0
I - Job Environment	2	2	3	3
J - Absence from Base of Operations	2	2	3	2
K - Accident and Health Hazards	4	4	4	6
Total	491	556	595	305

Table 16: Number of Years With Current Employer

Years With Employer	All	Engineers	Geoscientists	EIT/GITs
$20 \leq Y$	14.1%	18.7%	27.3%	0.0%
$10 \leq Y < 20$	18.5%	24.1%	27.3%	1.9%
$5 \leq Y < 10$	24.1%	27.4%	31.8%	14.0%
$2 \leq Y < 5$	30.9%	21.8%	13.6%	58.1%
$Y < 2$	12.4%	7.6%	0.0%	26.0%

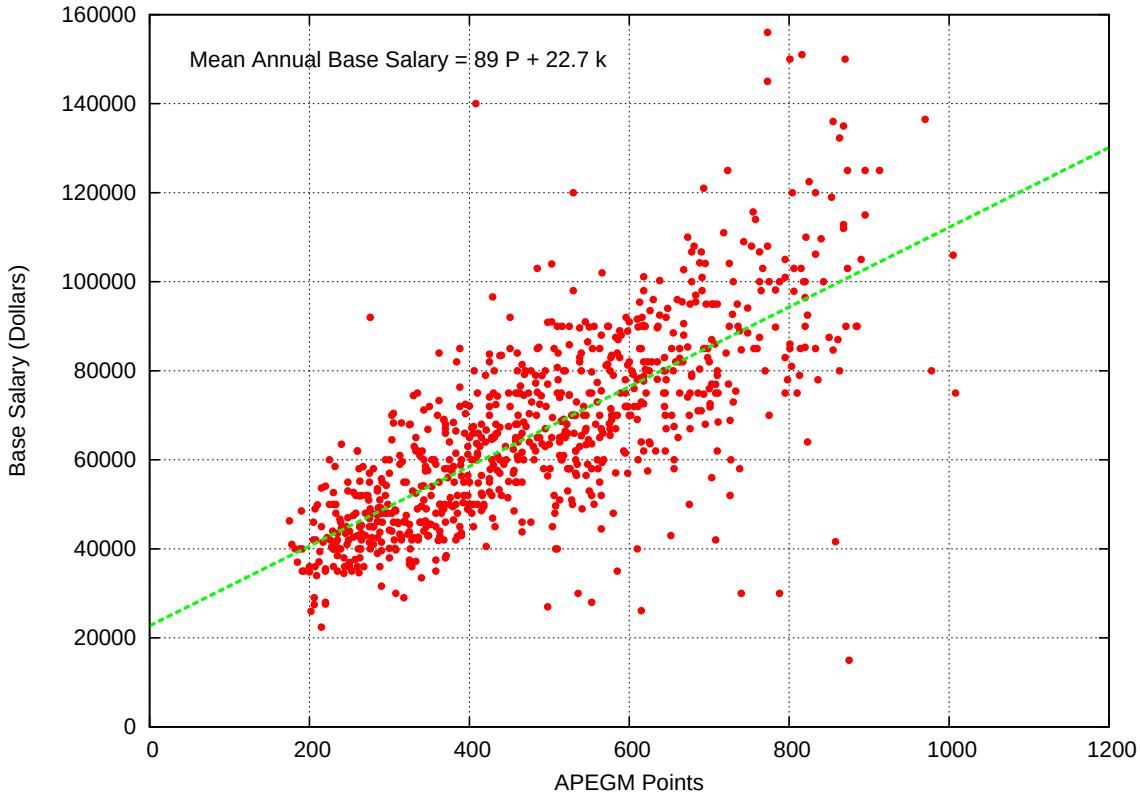

Figure 1: Base Salary Vs. APEGM Points

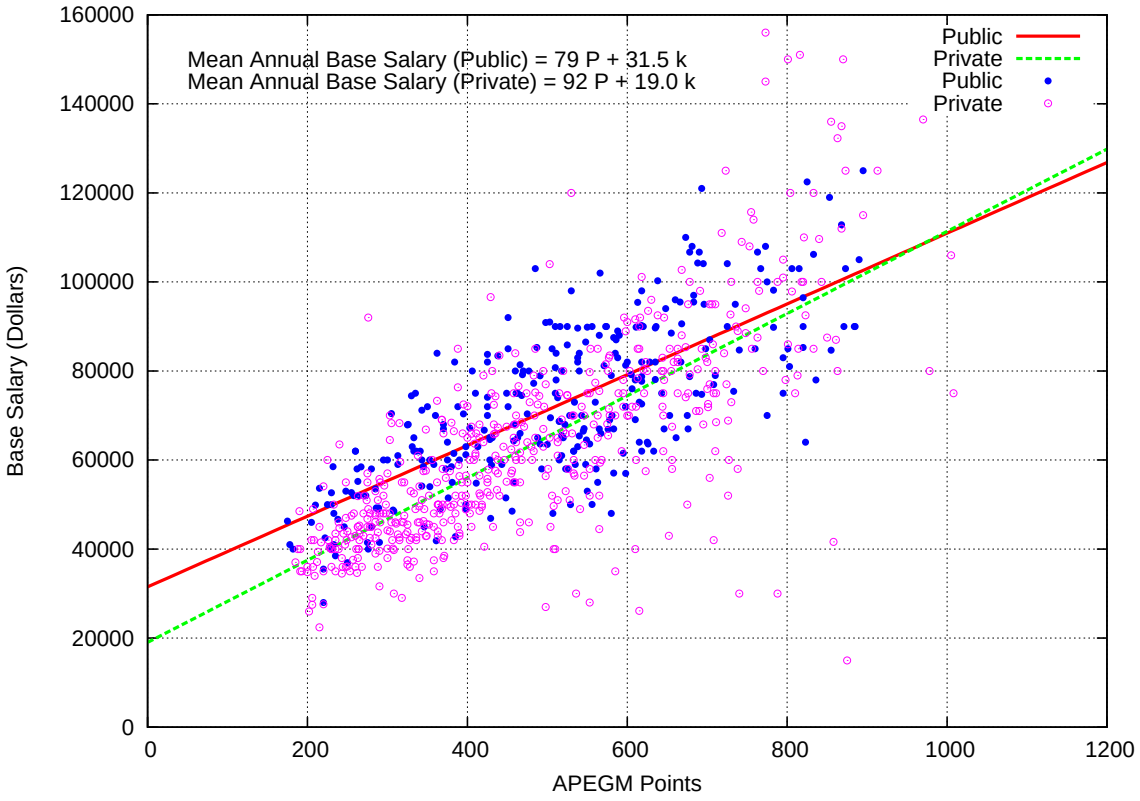

Figure 2: Base Salary Vs. APEGM Points for Public and Private Sectors

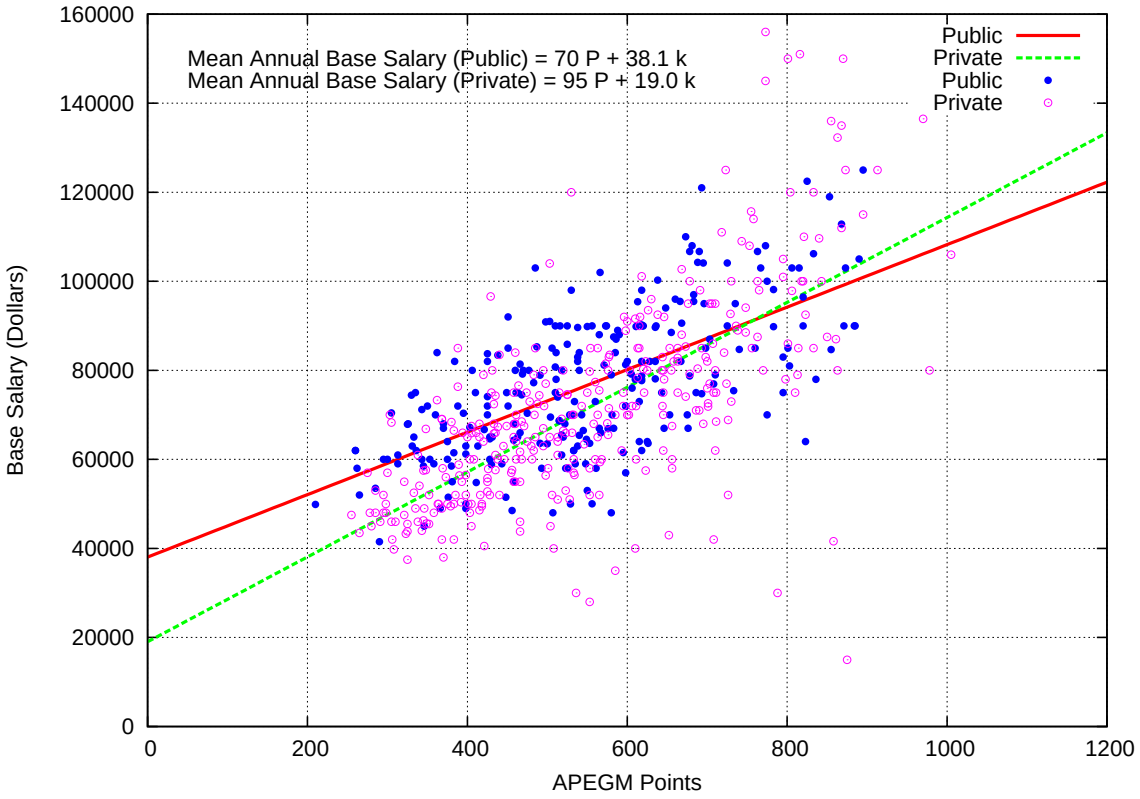

Figure 3: Base Salary Vs. APEGM Points for Public and Private Sectors (Engineers)

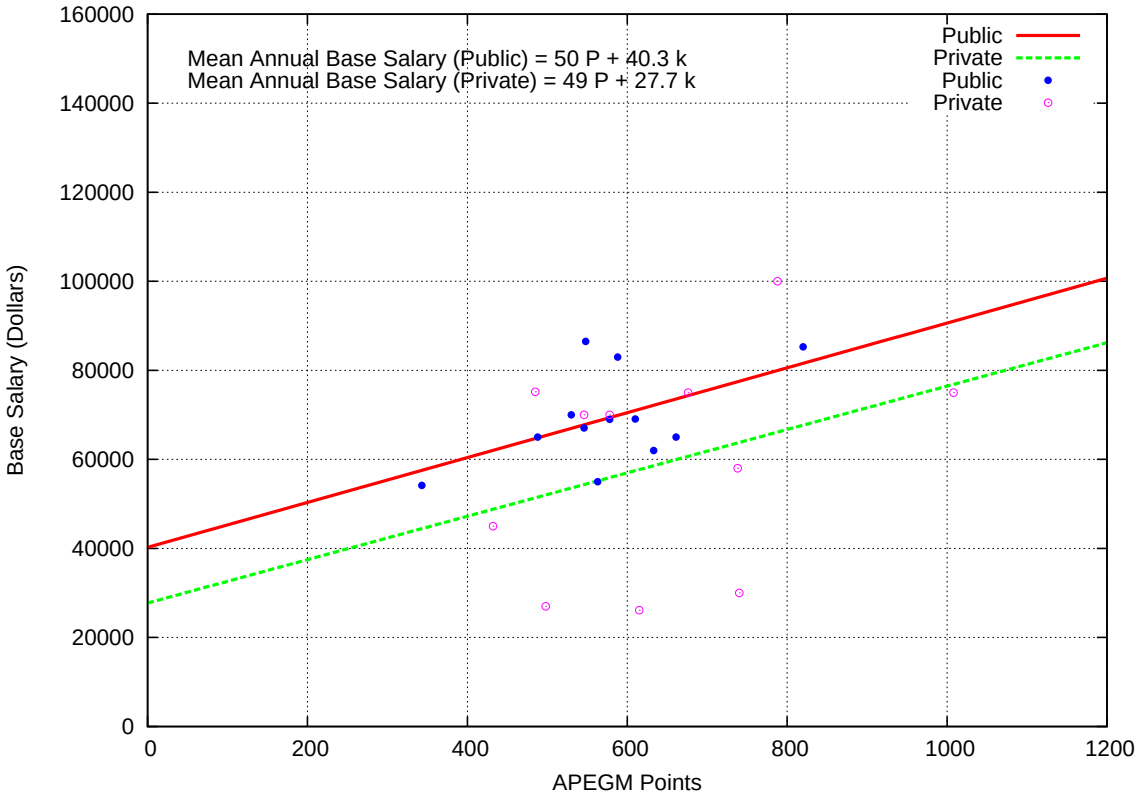

Figure 4: Base Salary Vs. APEGM Points for Public and Private Sectors (Geoscientists)

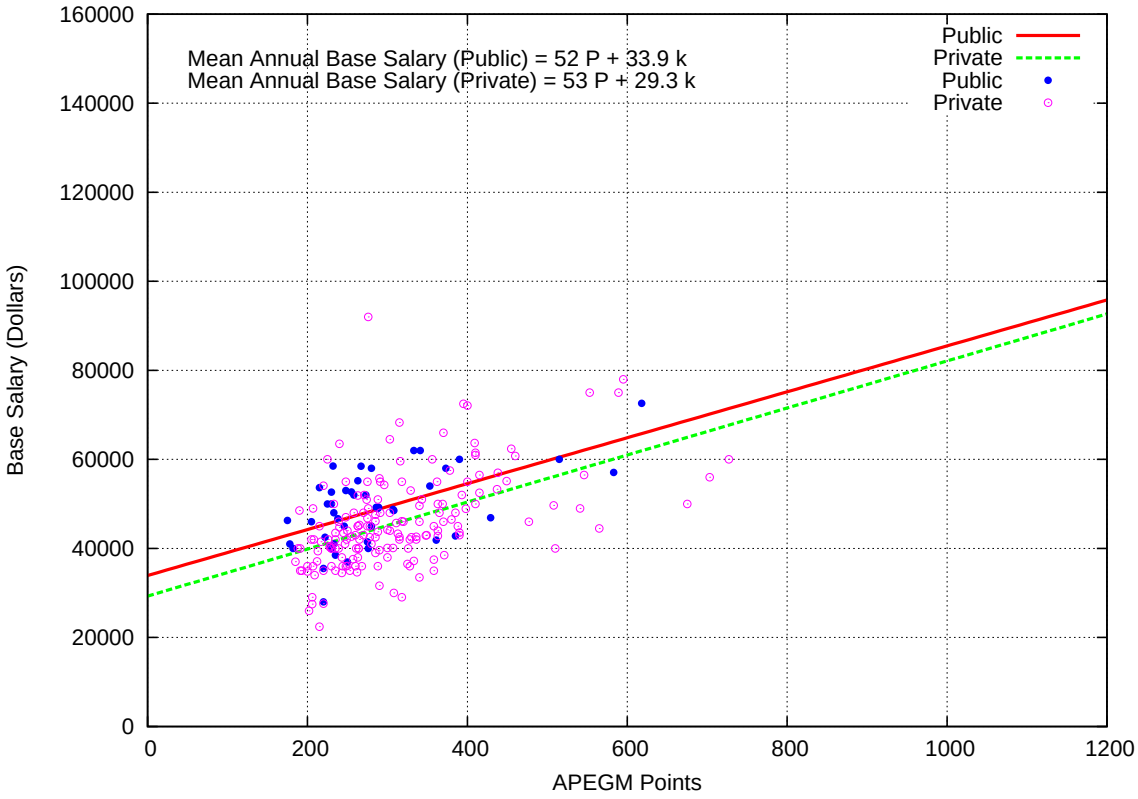

Figure 5: Base Salary Vs. APEGM Points for Public and Private Sectors (EIT/GITs)

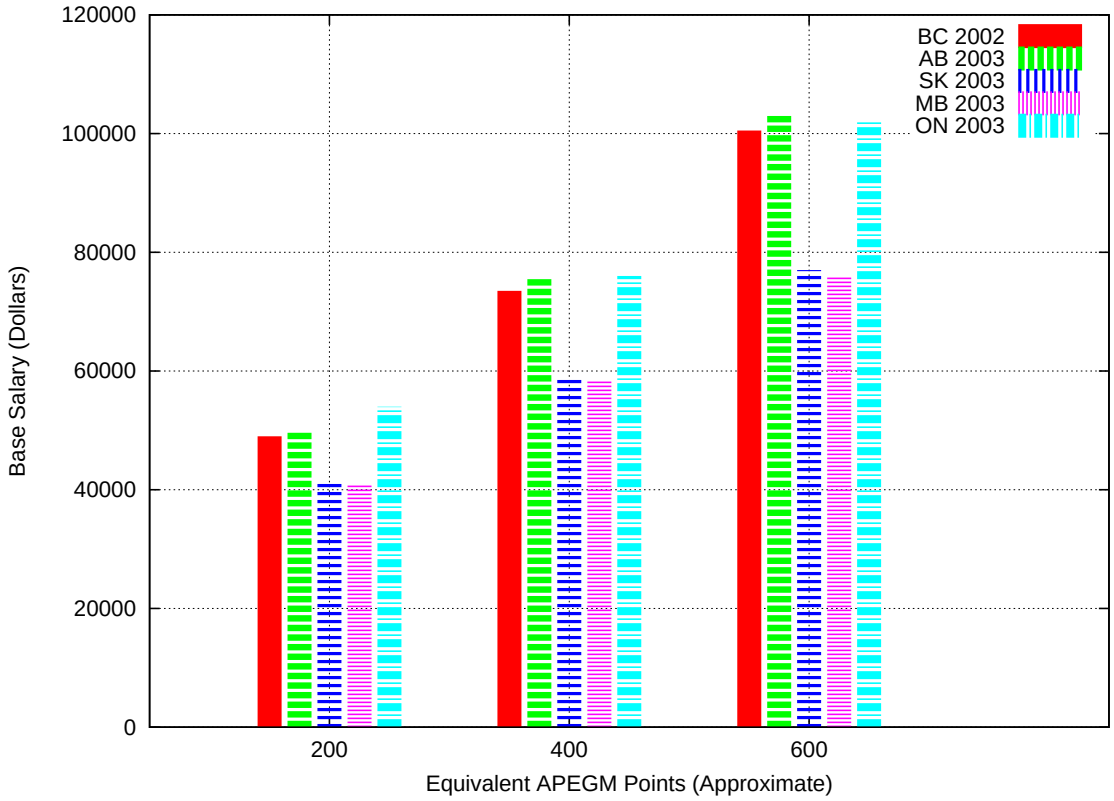

Figure 6: Mean Base Salary Vs. Approximate APEGM Point Ranges in Other Provinces

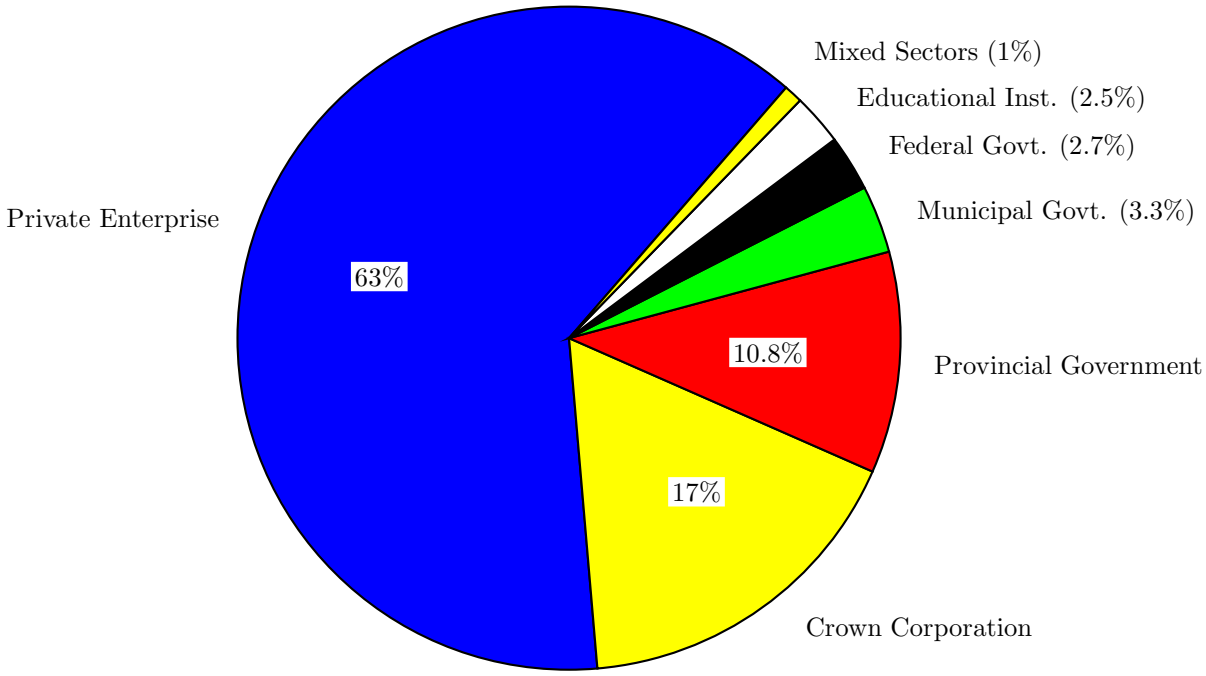

Figure 7: Responses By Employment Sector

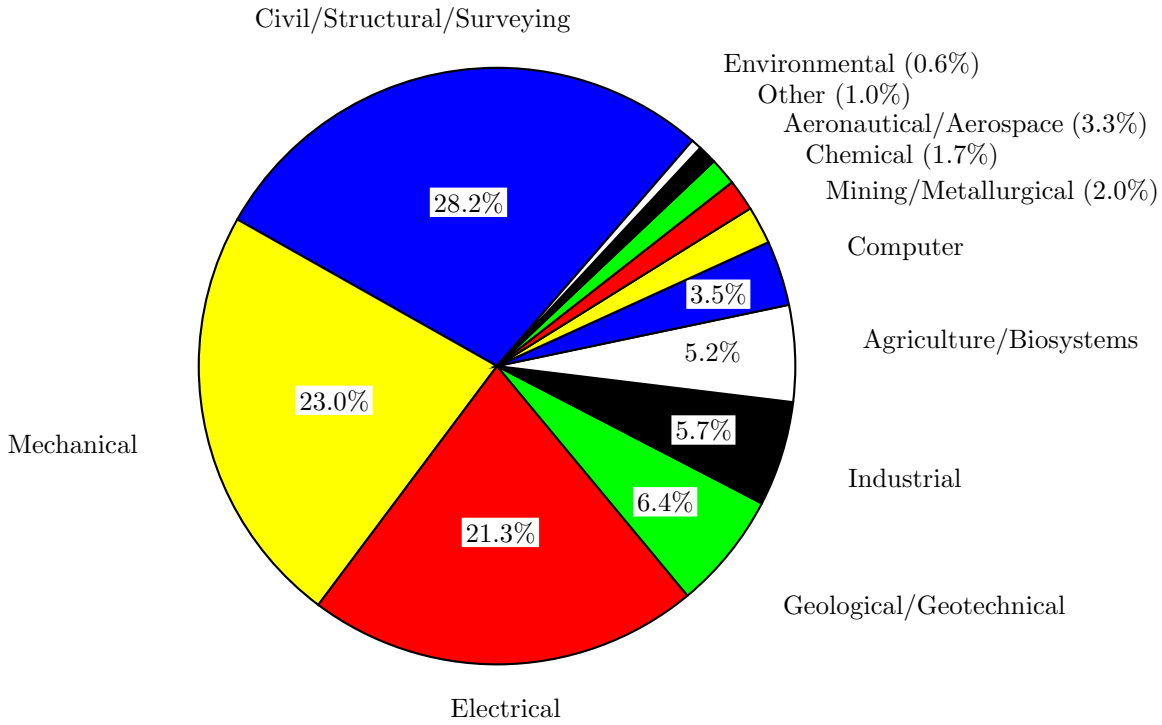

Figure 8: Responses By Discipline

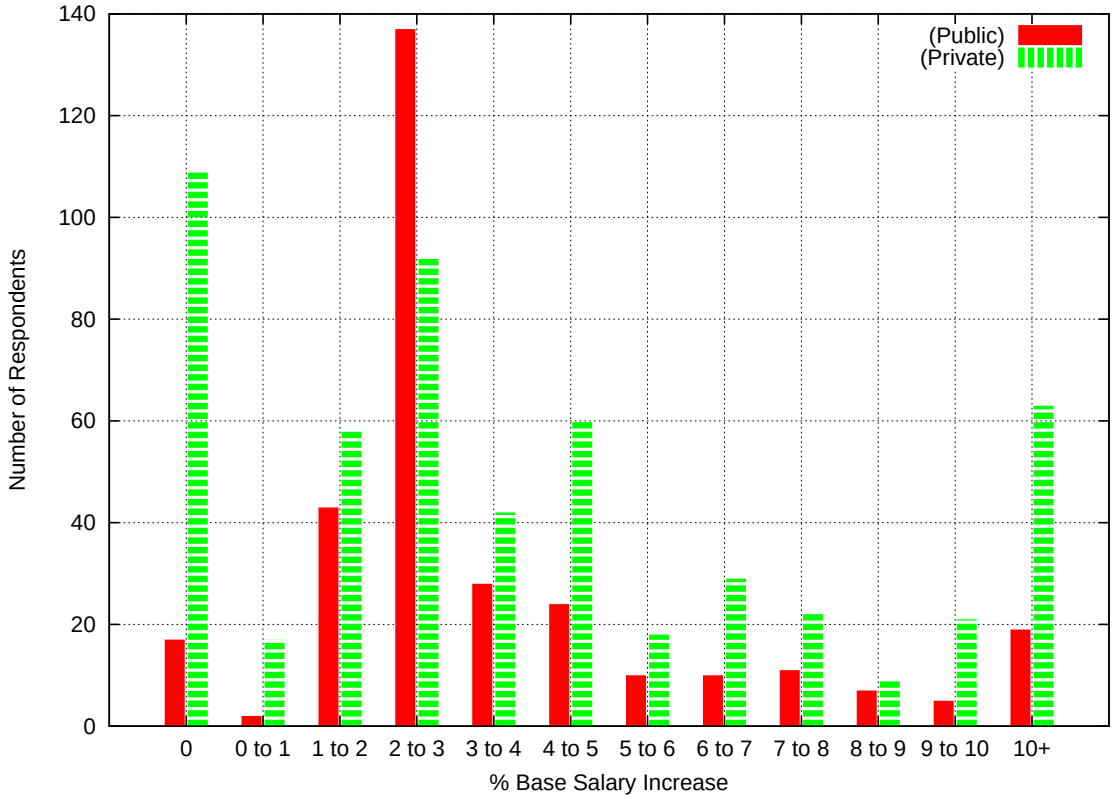

Figure 9: % Base Salary Increase for Public and Private Sectors

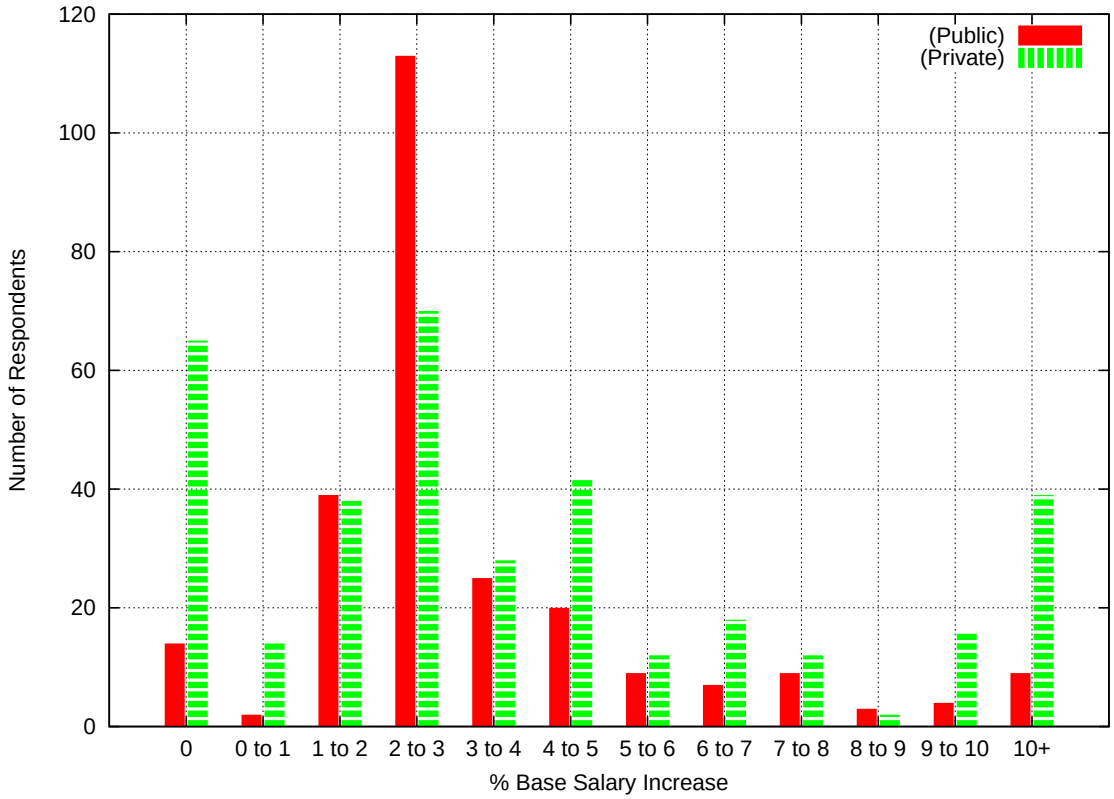

Figure 10: % Base Salary Increase for Public and Private Sectors (Engineers)

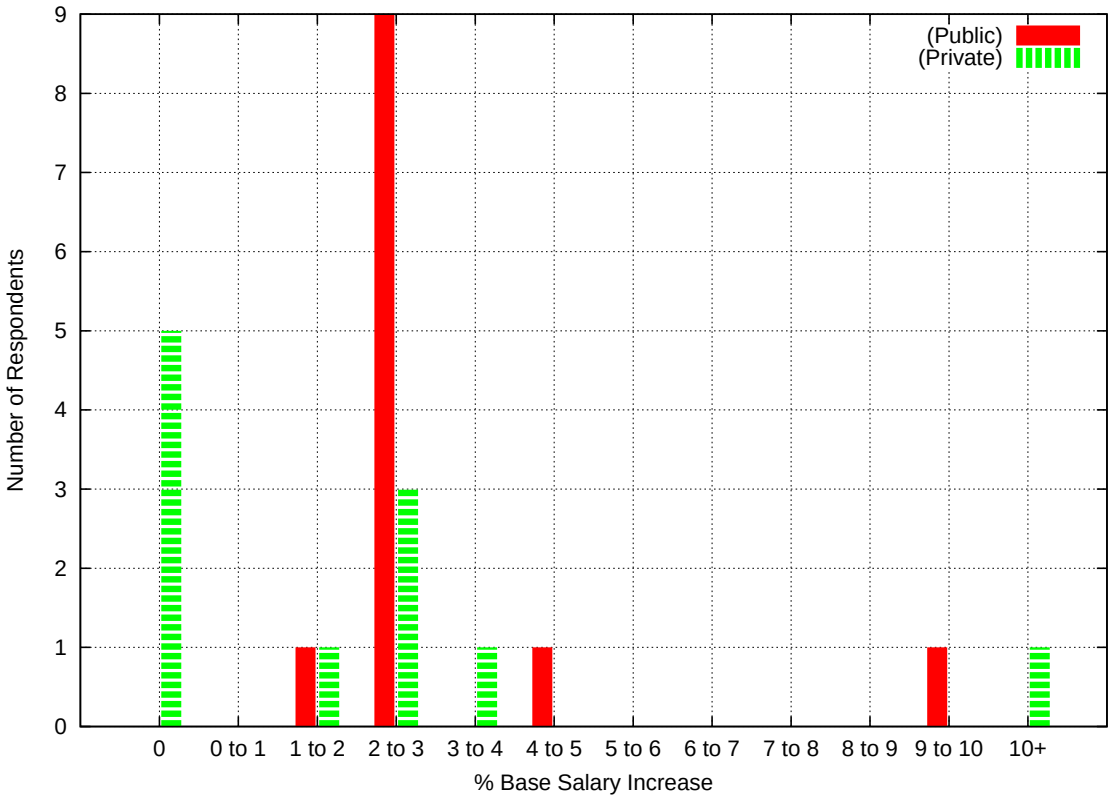

Figure 11: % Base Salary Increase for Public and Private Sectors (Geoscientists)

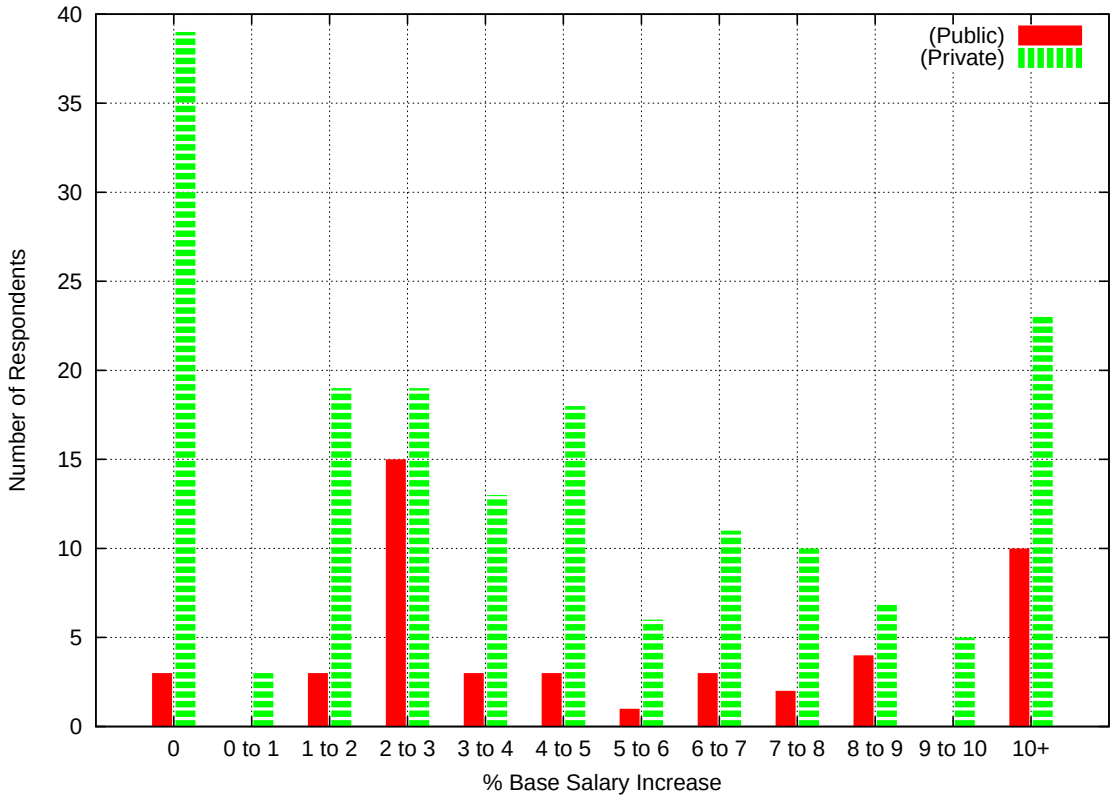

Figure 12: % Base Salary Increase for Public and Private Sectors (EIT/GITs)

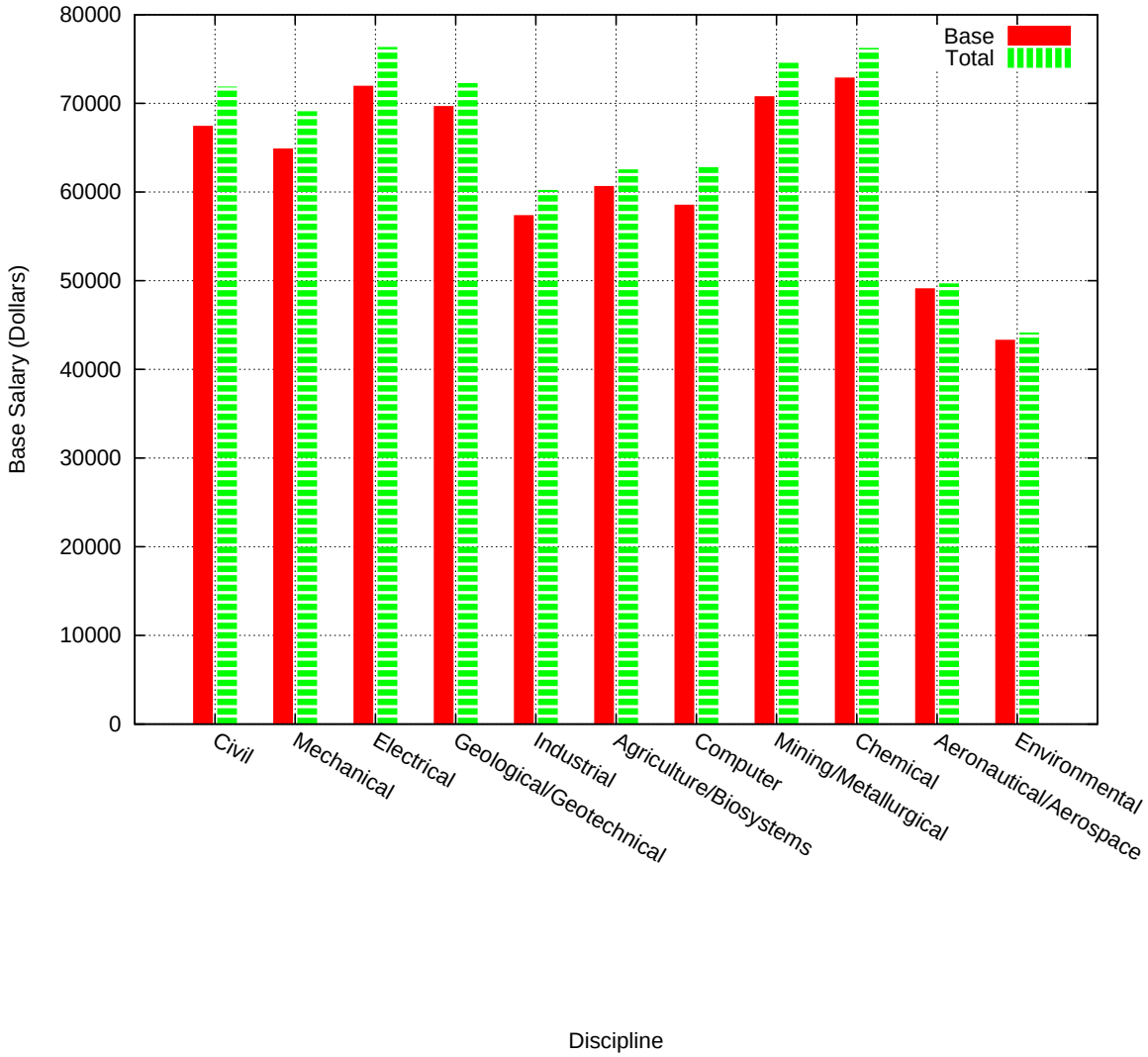

Figure 13: Average Base Salary and Total Salary (Bonus, Overtime, Commisions) By Discipline

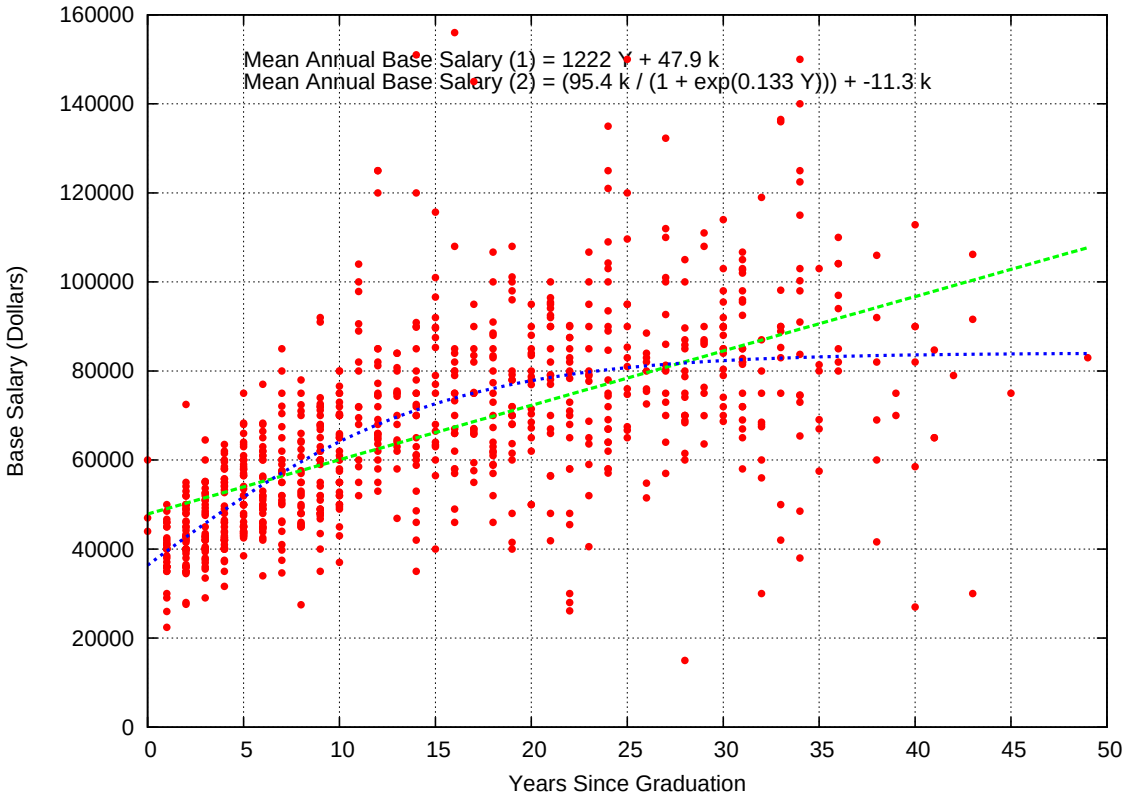

Figure 14: Base Salary Vs. Years Since Graduation

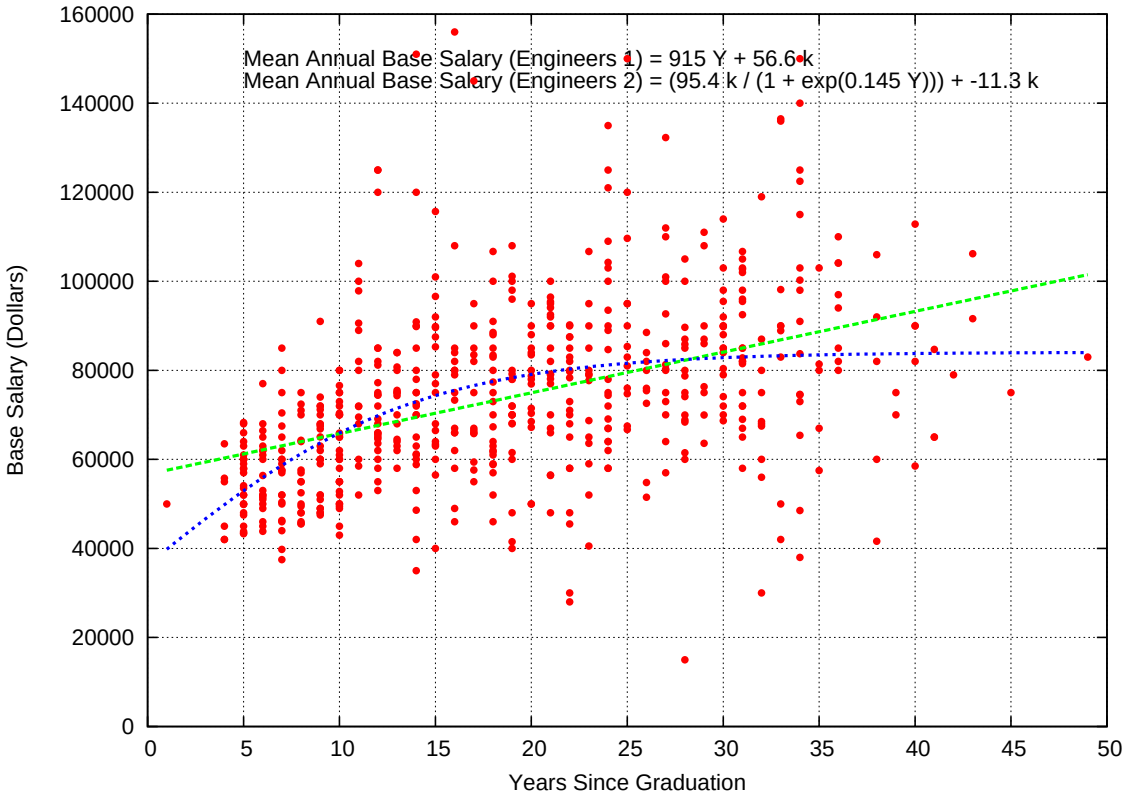

Figure 15: Base Salary Vs. Years Since Graduation (Engineers)

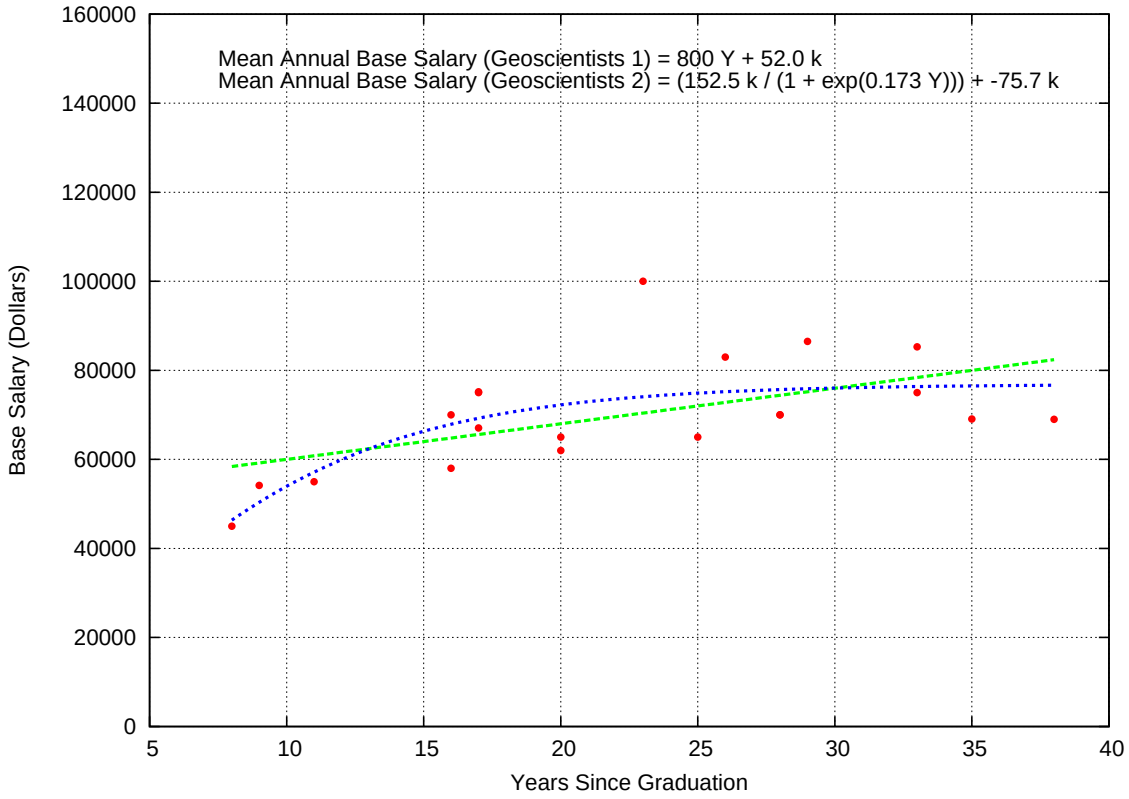

Figure 16: Base Salary Vs. Years Since Graduation (Geoscientists)

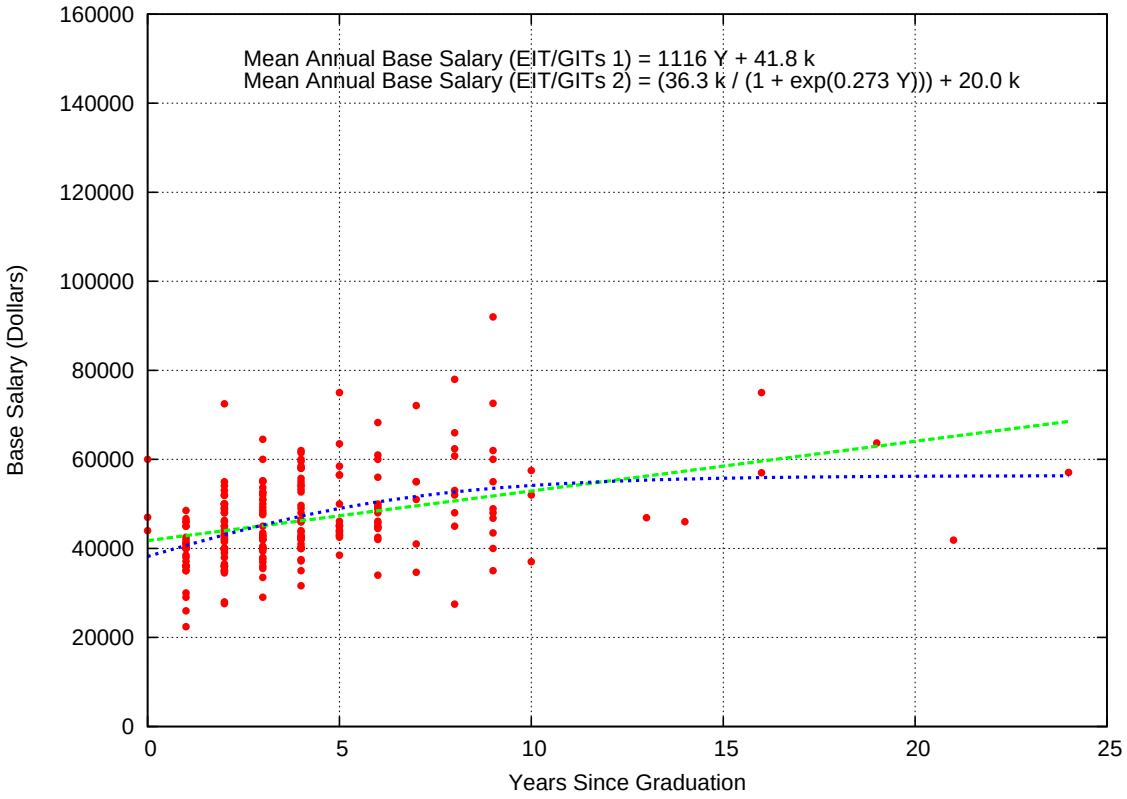

Figure 17: Base Salary Vs. Years Since Graduation (EIT/GITs)

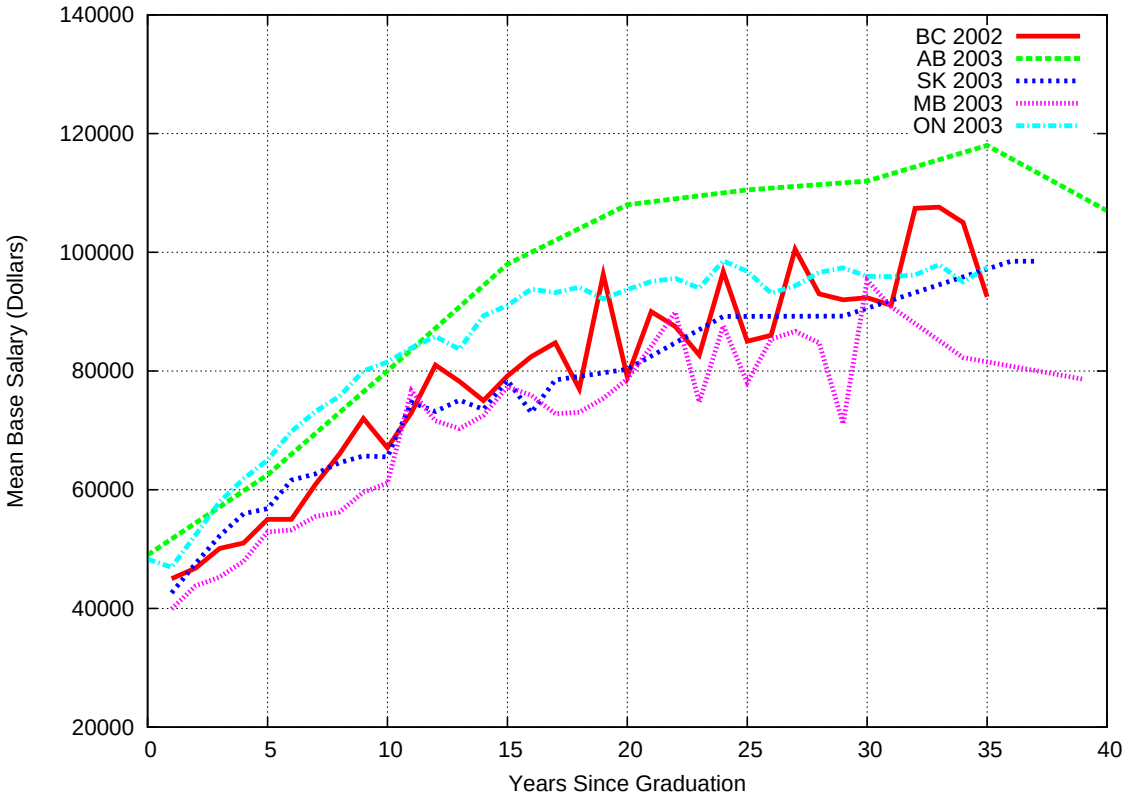

Figure 18: Mean Base Salary Vs. Years Since Graduation in Other Provinces

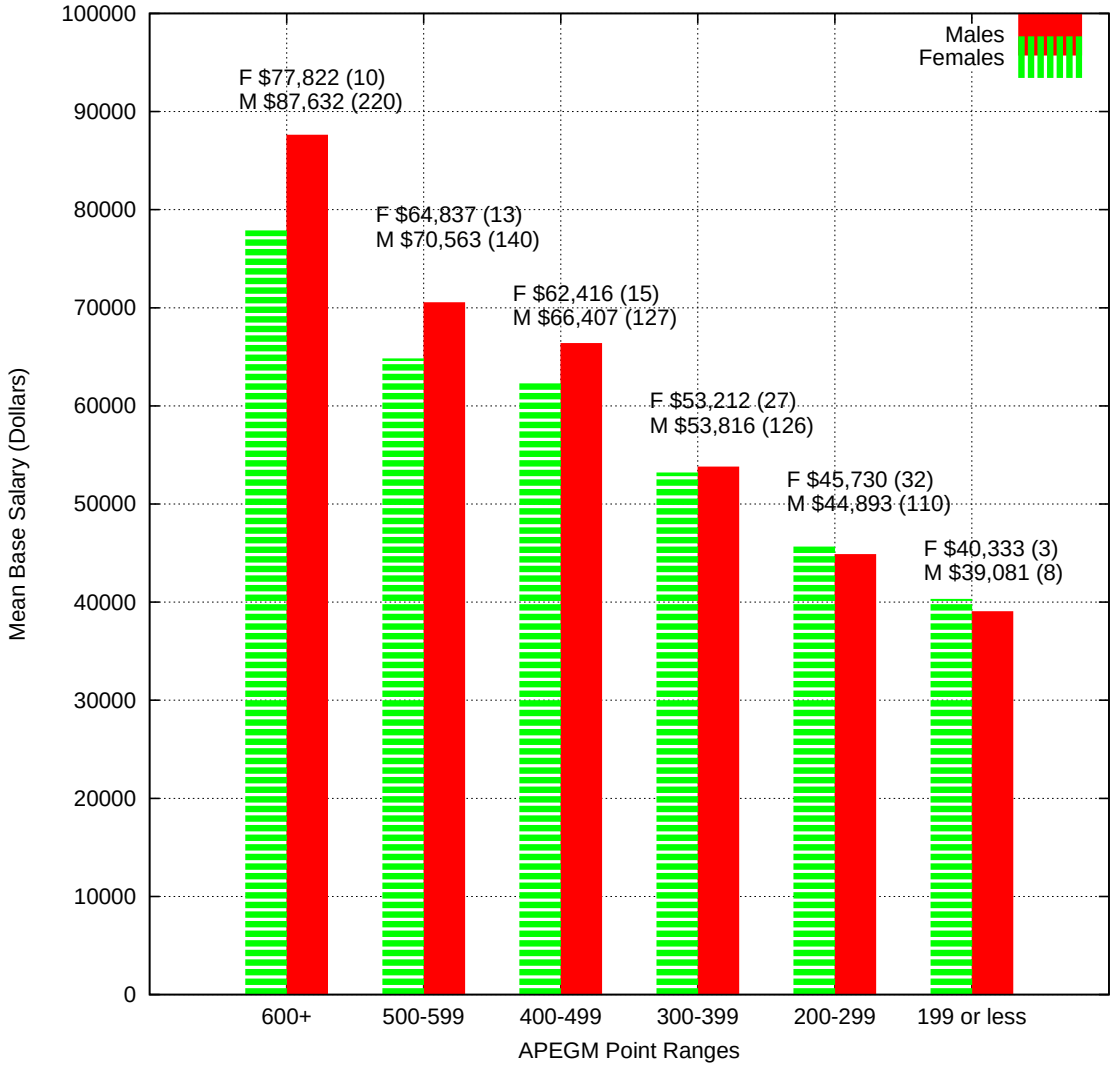

Figure 19: Mean Base Salary for Different APEGM Point Ranges by Gender

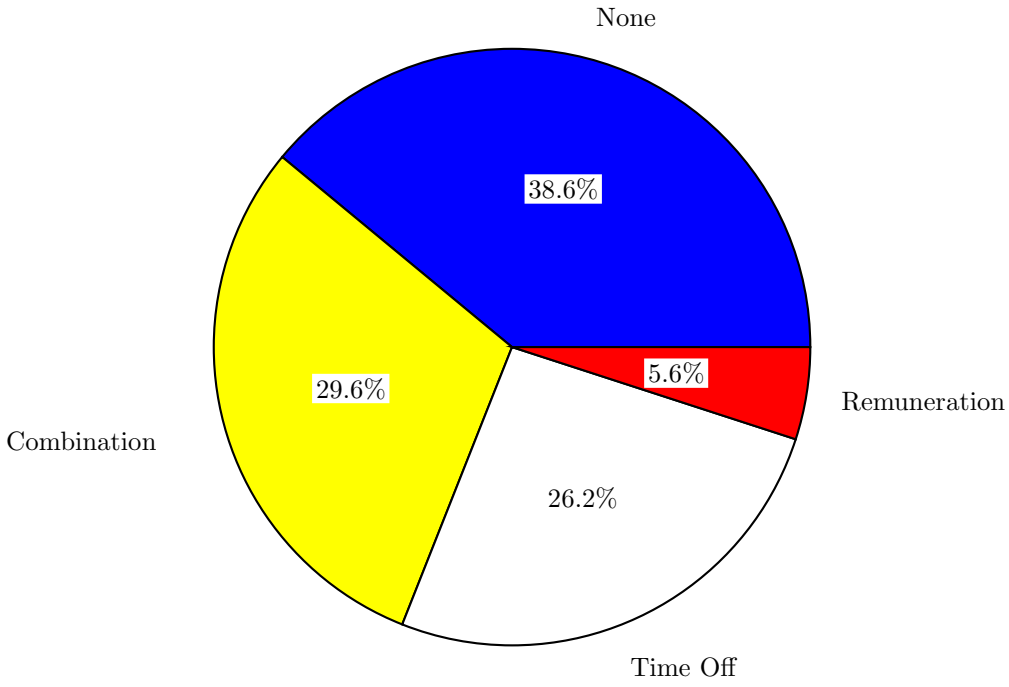

Figure 20: Compensation for Overtime

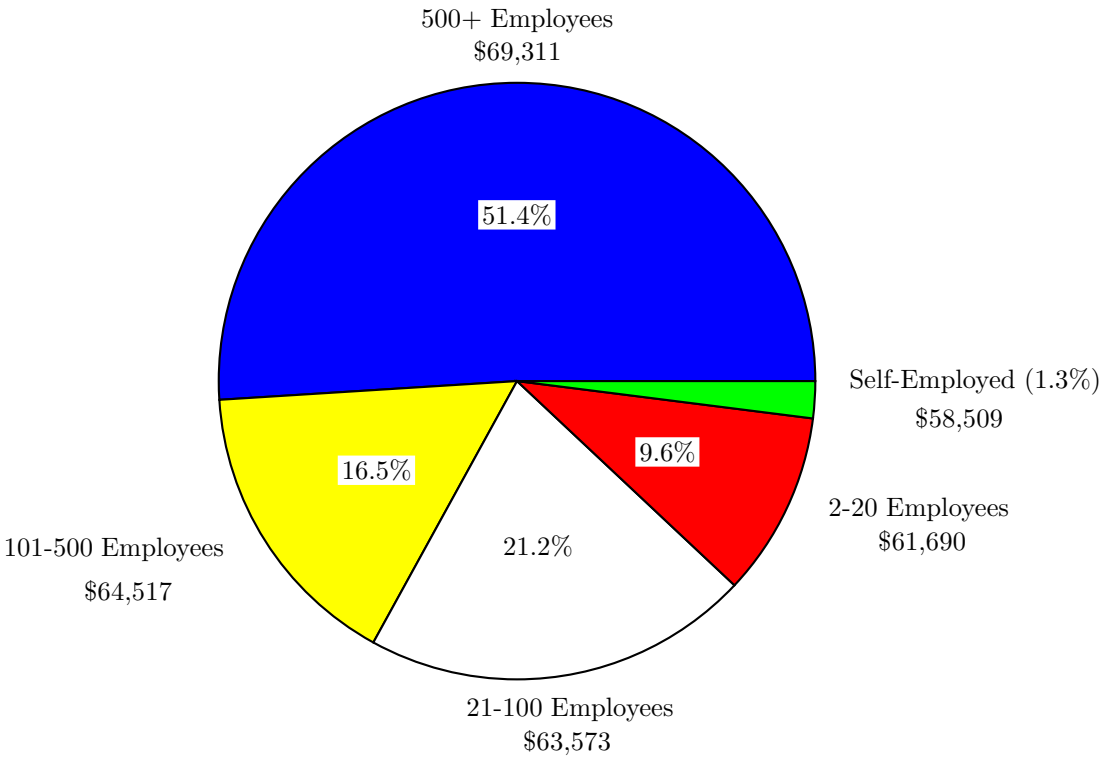

Figure 21: Size of Organization and Average Base Salary

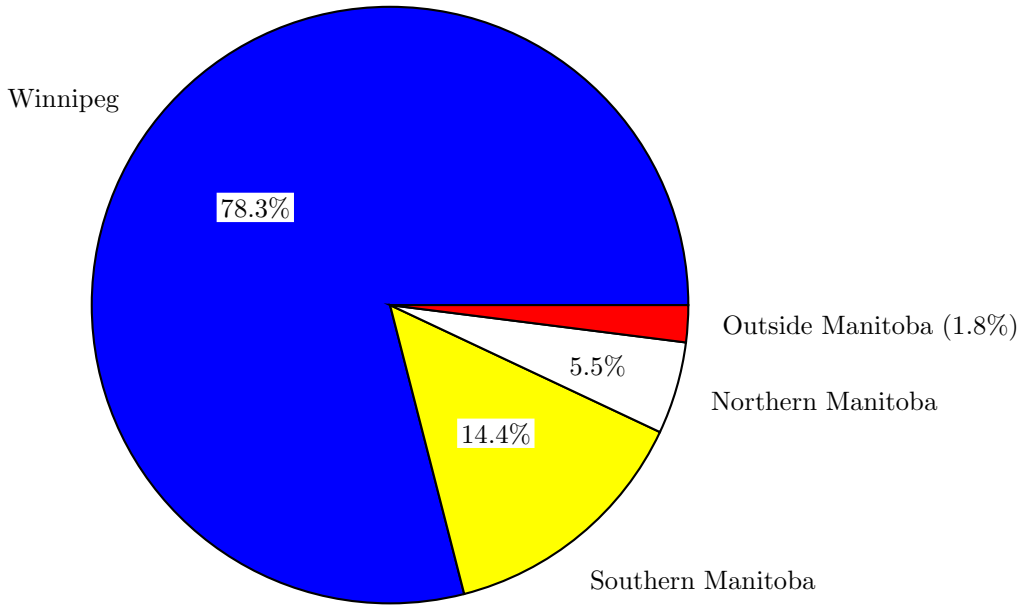

Figure 22: Principal Work Location