

COMPENSATION SURVEY OF IT AND IT ENABLED SERVICE INDUSTRY



Ministry of Information Technology
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LIST OF ANNEXURE

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- ANNEXURE-II Tools for analysis
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- ANNEXURE-IV List of persons met (*not attached*)
- ANNEXURE-V Questionnaires, Old and Modified (*not provided*)

DISCLAIMER

The purpose and scope of this Compensation Survey of IT and IT enabled service industry is to provide general salary bands at different hierarchy levels in industry. All the material included in this document is based on data/information gathered from organizations, which were identified by PSEB. Compilation, analysis, and presentation of data is purely based upon the figures provided by respondent companies during the survey. We used appropriate research techniques to ensure that collect data was as close to facts as possible. Variations in these results may occur if the respondent companies provided such data from another angle.

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION:

This document contains findings of the compensation survey of IT and IT enabled service Industry conducted by Khalid Majid Rehman (Private) Limited, Management Consultants. We would like to thank respondent organizations that participated in this survey.

Under the terms of reference for this particular assignment, the survey included a total number of 65 companies. Out of these companies, 40 organizations were from the software development sector with primary focus on domestic/hybrid business. 10 organizations form the software development sector having their primary focus on exports, 5 transnational companies and 10 call centers. These companies were randomly selected by Pakistan Software Export Board from Lahore, Karachi, and Islamabad / Rawalpindi. While the Consultants met and interviewed the relevant officials of these companies, only 42 companies actually participated in the Survey and provided relevant data to consultants. The segregation of these responsive companies in various categories is as under:

Companies with domestic business:	31
Companies with Primary focus on Exports:	05
Multi-Nationals:	00
Call Centres:	06

A tabular representation indicating the total companies contacted and the companies who gave their responsive is attached as “Annexure 3”.

The data collected from the surveyed organizations is categorized into gross salary, benefits information, motivation factors, employee retention, leave policies, training policies and some recommendations for future compensation. Moreover, the insight of the industry gained from the personal interviews, in addition to the information collected from questionnaires, shows a multidimensional picture of the employees’ benefits and other issues. This information is incorporated in appropriate parts of this report.

1.2 BRIEF OF ASSIGNMENT:

Pakistan Software Export Board solicited proposals from consulting firms to undertake compensation survey for IT and IT enabled service industry. Khalid Majid Rehman (Pvt) Ltd, after due process of technical and financial evaluation, was awarded the work. KMR started the assignment right after signing the contract on 6th April 2005.

For PSEB assignment, we assigned a dedicated team of experts in policy analysis, human resource management, information technology, research, and statistical analysis. The members of the team had ample experience in supervising/conducting surveys including

the compensation package in public and private sector. The senior members of team were supported by a group of young professionals in IT, research, statistics, and human resource management. Our core team of experts comprise Mr. Ahmad Khan (formerly Member CBR), Mr. Khusro P. Malik (Vice Chairman CASE). Assisting roles were played by Mr. Tariq Sultan (MBA) and Mr. Asim Habib (MBA) whose legwork and coordination brought this survey to defined outcome. Mr. Shamsair Khan, an experienced statistician was entrusted the statistical analyses of the data gathered from the companies surveyed.

KMR, based on its diverse experience, adopted a multi-disciplinary integrated approach in handling PSEB assignment. During the course of the assignment, the support personnel continuously floated relevant information to our core team members who scrutinized that information and gave it a proper shape, which was required by PSEB. The entire activity was carried through an extensive consultative and collaborative process at every step of the assignment.

Our methodology to complete this assignment included the major steps of survey design, theoretical framework, development of structured questionnaires based upon the specific requirements of the proposed assignment, collection of the required information by using on-line methods and traditional techniques, according to their relevance. The information collected was collated and analyzed in a manner that it met the overall objectives of the assignment. The analysis presented in this study will serve as a credible basis for any IT firm intending to participate in IT related activities in Pakistan, and assist the Government in its IT Policy formulation.

Furthermore, KMR also conducted personal interview sessions with the relevant personnel of software industry in order to attain correct and reality-based results. The interview results were integrated with the other information when conducting relevant analyses.

1.3 SALARY SURVEYS AND REVIEWS

Salary surveys are tools, used to determine the median or average compensation paid to employees in one or more jobs. Compensation data, collected from several employers, is analyzed to develop an understanding of the amount of compensation paid. Surveys may focus on one or more job titles, geographic regions, employer size, and or industries. The purpose of the salary surveys was to provide a means for comparison of salaries at the company. Survey data is often time sensitive and may become out-of-date quickly depending upon dynamic nature of industry. Salary surveys are normally conducted for benchmarking of key jobs and are essential for achieving “external equity” when designing compensation packages.

Salary Surveys can be conducted by employer associations, governmental agencies, survey vendors, consultants, individual employers, and the like. Surveys gather and summarize compensation information and provide a means for comparison of salaries at a particular company.

1.4 SALARY BANDS AND AVERAGES

In this survey, there are salary bands and averages worked out from the data in different categories of companies and in different regions, i.e. Lahore, Karachi and Rawalpindi / Islamabad. The multinational companies did not participate in this survey. To this extent, the survey information and analyses thereof, have their limitation.

Among these averages, there are comments on distribution of data. The number of organizations that are falling in different quartiles, however, there are some organizations which are lying in exceptional upper and lower quartile, this is further supported in our analysis by calculating skewness and kurtosis.

For Non-IT personnel, the hierarchy levels used were not differentiated on the basis of the number of years of experience - related to that title or with the industry. Nevertheless, the analysis and findings clearly reflect the salary ranges for the beginners and experienced personnel at different levels of these job titles.

1.5 STATISTICAL SUMMARY OF PERSONNEL IN COMPANIES WITH DOMESTIC/HYBRID BUSINESS:

IT Personnel

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO/Directors</i>
<i>Mean</i>	13143.04	22946.43	36764.58	50635.93	70352.20	86166.71
<i>Median</i>	11500.00	21750.00	35000.00	52500.00	63375.00	80000.00
<i>Maximum</i>	25000.00	45000.00	72500.00	95000.00	125000.0	165000.0
<i>Minimum</i>	5500.000	9000.000	13000.00	10000.00	27500.00	35000.00
<i>Std. Dev.</i>	5472.943	9891.391	15831.83	23102.67	21317.83	34453.18
<i>Skewness</i>	0.502283	0.520859	0.708953	0.250758	0.820721	0.631319
<i>Kurtosis</i>	2.117382	2.338878	3.122455	2.109237	4.089875	3.136215

Non- IT Personnel

	<i>Marketing Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance Accounts Managers</i>
<i>Mean</i>	24546.50	22331.62	24023.42	37859.91	28573.62
<i>Median</i>	21750.00	17275.00	20000.00	40000.00	22472.50
<i>Maximum</i>	73459.00	66394.00	65000.00	73459.00	66394.00
<i>Minimum</i>	5750.000	4000.000	6000.000	6000.000	5000.000
<i>Std. Dev.</i>	15384.23	16762.14	14287.65	18565.09	18077.29

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<i>Skewness</i>	1.161962	1.625193	1.401833	0.202635	0.717112
<i>Kurtosis</i>	4.839339	4.610407	4.769367	2.748486	2.459590

1.6 STATISTICAL SUMMARY OF PERSONNEL IN COMPANIES WITH EXPORT BUSINESS

IT Personnel

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO / Directors</i>
<i>Mean</i>	17750.00	29900.00	38950.00	63700.00	104750.0	121666.7
<i>Median</i>	20000.00	30000.00	42500.00	64000.00	88750.00	87500.00
<i>Maximum</i>	21250.00	42500.00	46500.00	81000.00	165000.0	210000.0
<i>Minimum</i>	9000.000	18500.00	25500.00	45000.00	75000.00	67500.00
<i>Std. Dev.</i>	4987.484	8597.965	8671.793	12804.30	36016.49	77149.75
<i>Skewness</i>	-1.360426	0.222664	-0.766039	-0.179883	1.081211	0.654023
<i>Kurtosis</i>	3.062273	2.409064	2.081162	2.463388	2.633263	1.500000

Non-IT Personnel

	<i>Marketing/Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance/Accounts Managers</i>
<i>Mean</i>	31100.00	34625.00	44166.67	57750.00	49125.00
<i>Median</i>	30000.00	31250.00	35000.00	58000.00	53250.00
<i>Maximum</i>	48000.00	65000.00	67500.00	85000.00	75000.00
<i>Minimum</i>	10000.00	11000.00	30000.00	30000.00	15000.00
<i>Std. Dev.</i>	16764.55	22410.47	20361.32	24500.00	27532.93
<i>Skewness</i>	-0.090475	0.503751	0.659440	-0.024036	-0.318097
<i>Kurtosis</i>	1.453154	2.049709	1.500000	1.462948	1.491790

1.7 STATISTICAL SUMMARY OF PERSONNEL IN CALL CENTERS

Core Activity Personnel

	<i>Call Center Agents</i>	<i>Supervisors</i>	<i>Team Leads</i>	<i>Call Center Managers</i>	<i>CEO / Directors</i>
<i>Mean</i>	16553.33	22564.00	24455.00	59000.00	85833.33
<i>Median</i>	15500.00	21500.00	24500.00	57500.00	70000.00
<i>Maximum</i>	25000.00	30000.00	30000.00	87500.00	125000.0
<i>Minimum</i>	13000.00	16820.00	18820.00	30000.00	62500.00
<i>Std. Dev.</i>	4374.136	4762.928	6403.236	24786.59	34125.99
<i>Skew-ness</i>	1.384038	0.567365	-0.000395	0.021268	0.668878
<i>Kurtosis</i>	3.489975	2.519165	1.000527	1.400689	1.500000

Support Personnel

	<i>Marketing/ Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance /Accounts Managers</i>
<i>Mean</i>	39166.67	24916.67	34000.00	26250.00	34000.00
<i>Median</i>	30000.00	18000.00	33750.00	26250.00	25000.00
<i>Maximum</i>	57500.00	57500.00	57500.00	30000.00	57500.00
<i>Minimum</i>	30000.00	13500.00	16500.00	22500.00	15000.00
<i>Std. Dev.</i>	15877.13	16737.43	14352.70	3227.486	17730.62
<i>Skew-ness</i>	0.707107	1.463399	0.467665	0.000000	0.357091
<i>Kurtosis</i>	1.500000	3.549756	2.361549	1.640000	1.522912

* Tables from 1.5 – 1.7 are mentioned in detail in survey information and analysis.

2. ACKNOWLEDGEMENTS AND PROJECT TEAM

2.1. Acknowledgments

We, the consultants express their sincerest gratitude and appreciation of the support provided by PSEB and the relevant officials in various organizations during the course of this assignment. It was truly a remarkable experience for us to interact with such high caliber personnel from IT Industry. We wish to mention here that the IT Industry appreciated this initiative of the PSEB.

These companies commended the efforts of PSEB for introducing such a concept in the local markets, as in their view it will not only benefit the employees in general but also help the employers to ascertain the on-going compensation trends in the market.

We also would like to specially thank Dr Aamir Matin and his team, including Mr. Nasir Khan Afridi, Ms. Sabahat Majeed, and Ms. Kiran Afsheen, who always extended their fullest cooperation during this project.

2.2 Project Team

Consultant's team of professionals, included a core team of (02) members who were continuously assisted by 03 young professionals during the course of entire assignment.

Our core team of experts comprised the undersigned, who is formerly Member Central Board of Revenue and Member Monopoly Control Authority possessing over 35 years of experience in the field of fiscal policies and reforms. The other expert of our core team was Mr. Khusro P. Malik, whose expertise in the field of Human Resource Management, Information Technology, and BPR are highly recognized both in the private and public sectors.

The support team comprising young professionals included, Mr. Shamsher Khan,, MBA Mr. Asim Habib, MBA and Mr. Tariq Sultan MBA.

3. GENERAL COMMENTS OF THE COMPANIES

3.1 COMMENTS OF INDUSTRY ON SURVEY

- 1) PSEB should publish this survey information and provide it to the participants of this industry that they should get some benefit out of it. Perform different regional workshops and invite these companies for sharing these results.
- 2) HR Forum should be form with managers from IT companies who should be there to resolve IT issues under umbrella of PSEB. PSEB's direct involvement should be there with companies to understand the problems well.

4. ASSIGNMENT METHODOLOGY

4.1 SAMPLE SIZE

PSEB identified the survey sample. PSEB identified a total of 65 companies from all over Pakistan including IT/Software companies with primary focus on domestic business, IT/Software companies with primary focus on exports, Multinational IT companies and Call Centers located in Karachi, Lahore and Islamabad.

4.2 TYPE OF RESEARCH:

Primary research was the requirement for this survey therefore data was collected using following techniques:

1. Questionnaires
2. Personal interviews

4.3 CATEGORIES AND HIERARCHY LEVELS

KMR in consultation with PSEB identified comparable positions in the organizations surveyed. We have previously mentioned that these hierarchy levels are mostly similar /identical to the positions commonly used in IT and IT enabled service industry in the identified categories of companies selected for the purposes of the compensation survey.

While the position descriptions match closely across organizations, the size of the organizations and the scope of responsibility vary.

This variation contributes to difference in pay scales as seen in the data and representations that follow.

As indicated by the PSEB the analysis should also discover the compensation levels of Non-IT personnel working in IT industry. Therefore, we suggested following IT and Non-IT levels with respect to the companies categories.

IN SOFTWARE COMPANIES:

IT personnel including

1. Entry level software developers (no experience, BSc degree required)
2. Senior developers (>2 years experience)
3. Team Leads (>5 years experience)
4. Project Managers (>7 years experience)
5. Operations Manager (>10 years) and

Non-IT personnel including

1. CEO / COO
2. Marketing/Sales Managers
3. Administration Managers
4. Human Resource Managers
5. Business Managers
6. Finance/Accounts Managers

IN CALL CENTERS:

Core Activity personnel including

1. Call Center agents
2. Team Leads
3. Call Center Managers

Support personnel including

1. CEO / COO
2. Marketing/Sales Managers
3. Administration Managers
4. Human Resource Managers
5. Business Managers
6. Finance/Accounts Managers

4.4 PREPARATION OF STRUCTURED QUESTIONNAIRE

Structured Questionnaires were developed in consultation with PSEB officials. These include all the hierarchy levels of IT and Non-IT personnel in Software/IT companies, Call Centers and Vendors (offering total solutions/hardware). The design of questionnaires was based on the objectives and desired outcomes of the assignment.

4.5 PILOT TESTING AND MODIFICATION OF QUESTIONNAIRES

Pilot testing was done for the three questionnaires (for S/W companies, Hardware vendors, and for Call Centers) through personal meetings in all above categories.

During these meetings, the contents of questionnaire were discussed in the background of the objectives/findings of the assignment. The questionnaires were modified, where required, in the light of the comments offered by the management of firms interviewed. The modified questionnaires were submitted to PSEB for approval, which was duly obtained prior to their circulation to the identified 65 companies.

4.6 TYPE OF DATA TO BE GATHERED

Practically it was not possible to attain the actual salary figures of each and every individual working with all mentioned categories of companies. It was also found to be a burden on the human resource managers of those companies to provide us with such large number of figures. Accordingly, the consultant and PSEB agreed to identify the salary bands from each company and then normalize the result to the averages prevailing at different hierarchy levels in these organizations with respect to the categories mentioned as well as the regions.

4.7 PSEB APPROVAL

On consultant's request, PSEB addressed letters to all identified companies communicating the appointment of KMR (Management Consultants) for the proposed assignment concerning 'compensation survey of IT and IT Enabled Companies' and requesting their support in project accomplishment. These letters clearly introduced the objectives of the assignment and asked the companies to identify contact persons to KMR for interviews/data collection.

4.8 DISTRIBUTION OF QUESTIONNAIRES

Immediately after the dispatch of PSEB letter to the 65 companies, consultant mailed the questionnaires to these companies mainly by on-line method. These questionnaires were also delivered to the relevant persons at the time of personal interviews where, for some reason, these had not reached them earlier.

4.9 MEETINGS HELD

The consultant planned personal meetings/interviews with the 65 companies – starting with those located at Islamabad/Rawalpindi followed by the companies at Karachi and Lahore. All these meetings were held with the Human Resource/Administration /Finance Managers. In several cases, the senior management including the Directors and CEOs participated in these meetings, which added value to the quality of discussion.

During these meetings, the objectives of the assignment and the extent it would help both the Government and the IT/IT Enabled companies/IT Sector as a whole were discussed at great length. The designed questionnaires were discussed with the management of these companies and where required necessary explanations were offered to enable the companies to accurately respond to the required information.

The consultant observed mixed response from companies interviewed. While some of them showed great interest in the survey, others were reluctant to part with the requested information on various grounds including: confidentiality of personnel-related

information. All multi-nationals refused to participate, as they could not get clearance from their head offices for sharing of information with the consultants.

4.10 GENERAL APPRECIATION OF COMPANY'S RESPONSE

Once again we thank all the organizations that participated in this survey and appreciate their coordination. During our meetings/discussions with the management of the companies interviewed, their CEOs, managers and experienced personnel in IT industry shared their general perspective of the IT industry's personnel requirements, available skills and costs to firms. They shared with consultants their views on present and future status of IT industry in Pakistan and its development path to meet the domestic and global business requirements. They also briefly mentioned some of the issues, constraints and possible remedial measures for unhindered development of IT industry in Pakistan.

With regards to the compensation survey, almost all companies desired that the consultant / PSEB should share the survey results with the participating companies (and others if recommended) through inter-active workshop before finalizing the report. In some cases this has been made the condition precedent for providing the information.

These companies have also obtained 'confidentiality agreements' from the consultant that data obtained from them would be shared with PSEB in a generic form without relating it to them in particular.

4.11 LIMITATION OF THE ANALYSIS:

KMR used all practical means to get filled questionnaires from all survey recipients. Nevertheless, the data was obtained from 42 companies out of a selected sample of 65.

The analysis is based on the information received from the questionnaires floated to the identified organizations.

So the validity of the analysis is highly dependent on the accuracy of information we received from organizations. Though, almost 35% of the companies amongst the survey sample have either refused to participate in this study, or they did not provide their information, it may be said, with reasonable assurance that the remaining 42 companies represents 15% of whole industry which is a significant sample size.

5. SURVEY INFORMATION AND ANALYSIS OF DATA

KMR used the standard renowned hierarchy positions that are commonly used in IT and IT enabled service industry in the identified categories of companies; these are further used for comparison with the surveyed organizations.

The analysis is based on the figures obtained under the head of gross salary. The breakup of gross salary in terms of basic and total allowances from most of the firms in the industry was not able to access. However, after carefully studying the forms obtained from companies, the findings related to the allowances, leave policies and training are mentioned in the later part. The reasons identified by the consultant for variations in the gross salaries are also precise in five steps.

5.1 IT PERSONNEL IN SOFTWARE COMPANIES WITH DOMESTIC / HYBRID BUSINESS

In order to make accurate comparisons in IT / Software industry, standard hierarchy levels and descriptions were identified in the industry and further analysis is mentioned accordingly:

Education / Qualifications of IT Personnel

Generally, the software development industry requires the individuals to have BCS, MCS, BS degrees or Engineering degree in Computer Science. In some instances, they are required to possess the related degrees of CE, EE, CSE and several modern skill sets are required according to the projects need.

By and large, the experience requirements increases with the hierarchy levels; however the organizations are indifferent where capabilities of the individuals excel in some way or the other to attain a higher level with respect to experience.

5.1.1 Entry Level Developers

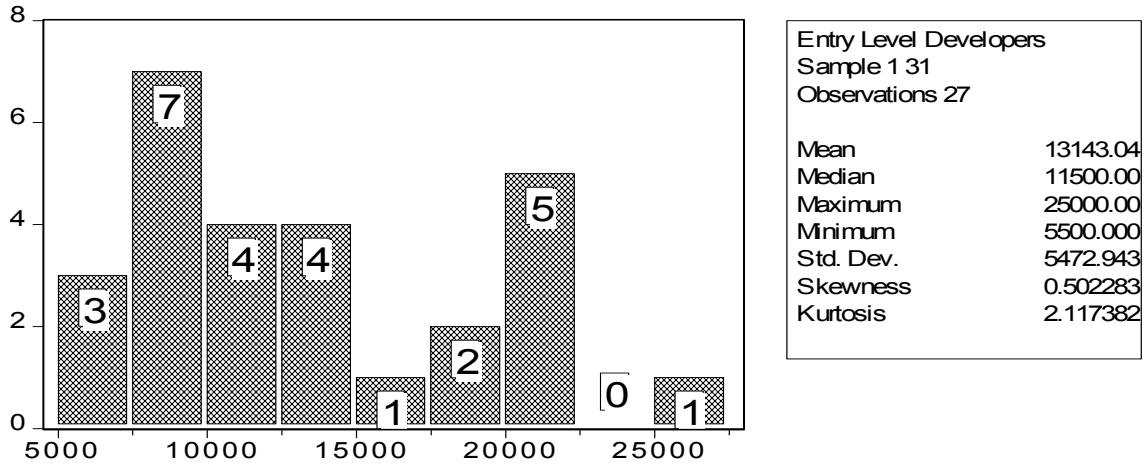
The role of developers is purely IT related. Personnel are involved in project/software development, programming, coding, decoding, basic graphical designing, etc.

Companies usually hire fresh graduates on these positions; however, candidates with experience of less than two years in the field of software development / programming / engineering are also hired on these positions. This qualification requirement varies in different enterprises, as it is dependent upon the type of services of that particular concern.

Compensation Structure of Entry Level Developers

The average Gross Salary at entry level developers is Rs. 13,143. The maximum salary at this level is Rs. 25,000 and minimum is Rs. 5,500. The table below shows salary bands and number of organizations falling in those bands at this level. A standard deviation

(variation in salaries) of Rs. 5,472 exists at this level. The Skewness of 0.50 indicates that the distribution is positively skewed as compare to zero for normal. The Kurtosis 2.11 shows that the distribution is flat relative to the normal. The graph and table below also shows this entire statistic as explain above with number of companies at different salary marks.



Sample: 1 31				
Included observations: 31				
Number of categories: 5				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[5000, 10000)	10	37.04	10	37.04
[10000, 15000)	8	29.63	18	66.67
[15000, 20000)	3	11.11	21	77.78
[20000, 25000)	5	18.52	26	96.30
[25000, 30000)	1	3.70	27	100.00
Total	27	100.00	27	100.00

* The difference between the sample observations and total count in the tables is occurring due to the fact that certain companies do not carry these designations.

5.1.2 Senior Developers

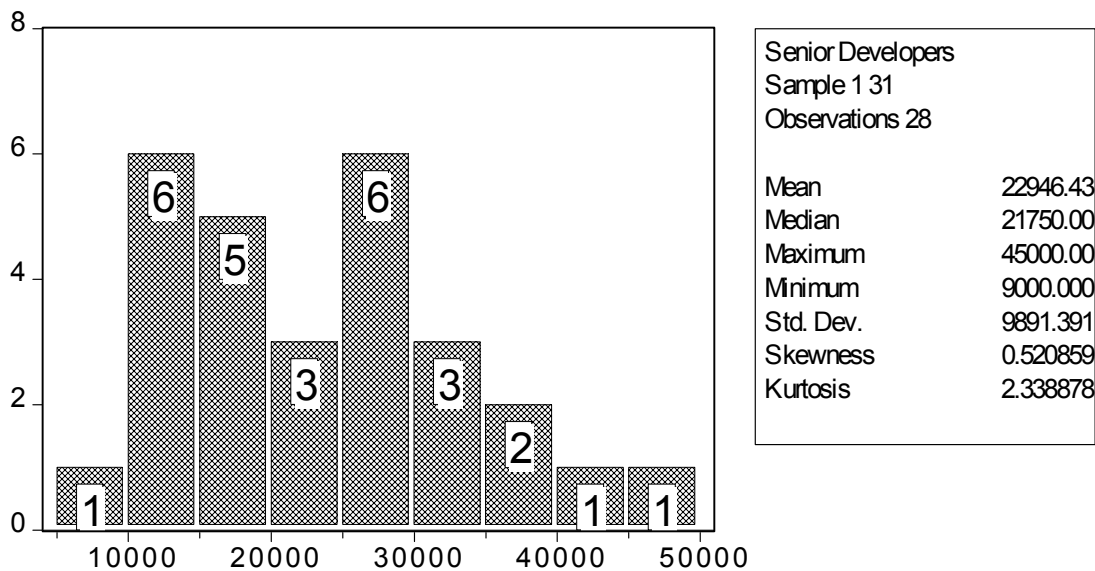
This role supports the software development in the organization. Personnel are involved in project/software development, supervising the sub ordinate staff for programming and codes writing.

They have an experience of more than two years in the field of software development / programming / engineering. These personnel acquire skills like System Analysis, System Design, Business Process Reengineering, and Functional Specification Document.

However in some organizations where engineering is the core activity, seniors developers are also assigned to undertake the jobs like Map digitization, Satellite imagery interpretation, Digital terrain model, Global positioning system, GIS database & geographic analysis and Model development.

Compensation Structure of Senior Developers

The average Gross Salary at senior level developers is Rs. 22,946. The maximum salary at this level is Rs. 45,000 and minimum is Rs. 9,000 showing a range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 9,891 found at this level from the data analyses. The Skewness of 0.52 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.3 is closed to standard 3 shows that the distribution is flat as compared to the normal. The graph and table below also shows companies in salary bands with entire statistic as explain above.



Sample: 1 31				
Included observations: 31				
Number of categories: 5				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 10000)	1	3.57	1	3.57
[10000, 20000)	11	39.29	12	42.86
[20000, 30000)	9	32.14	21	75.00
[30000, 40000)	5	17.86	26	92.86
[40000, 50000)	2	7.14	28	100.00
Total	28	100.00	28	100.00

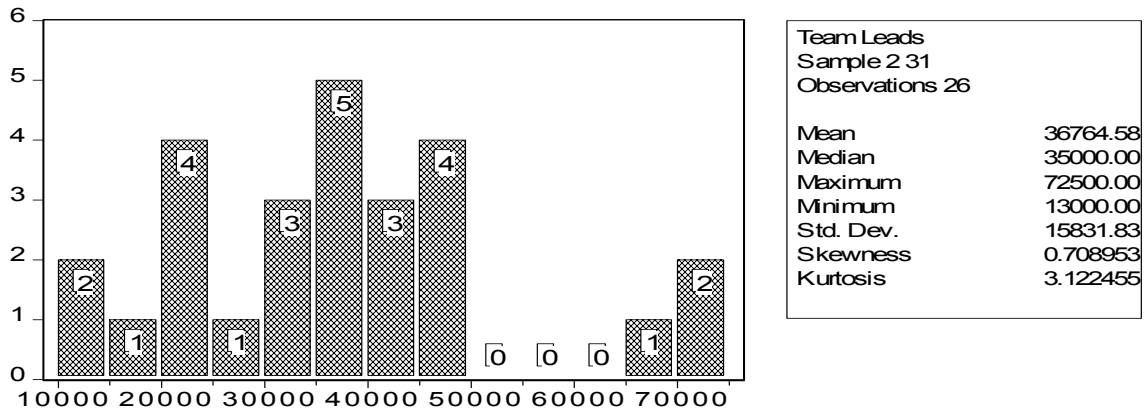
5.1.3 Team Leads

This role supports software development and strives to ensure that the developers are on the proper track of the project. Personnel are involved in project/software development, supervising the sub ordinate staff for programming and codes writing.

The experience of these personnel ranges from five years and more in the field of software development, programming and supervision. These personnel acquire skills like System Analysis, System Design, Business Process Reengineering and Functional Specification Document.

Compensation Structure of Team Leads

The average Gross Salary at Team Leads is Rs. 36764. The maximum salary at this level is Rs. 72,500 and minimum is Rs. 13,000. The ranges in salary bands are shown in the table below at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 15831 exists at this level. The Skewness of 0.70 indicates that the distribution is positively skewed as compare to zero for normal distribution. The Kurtosis 3.12 is closed to standard 3 shows that the distribution is relative to the normal. The graph and table below also shows these entire statistics as explain above.



Sample: 1 31				
Included observations: 31				
Number of categories: 4				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	3	11.54	3	11.54
[20000, 40000)	13	50.00	16	61.54
[40000, 60000)	7	26.92	23	88.46
[60000, 80000)	3	11.54	26	100.00
Total	26	100.00	26	100.00

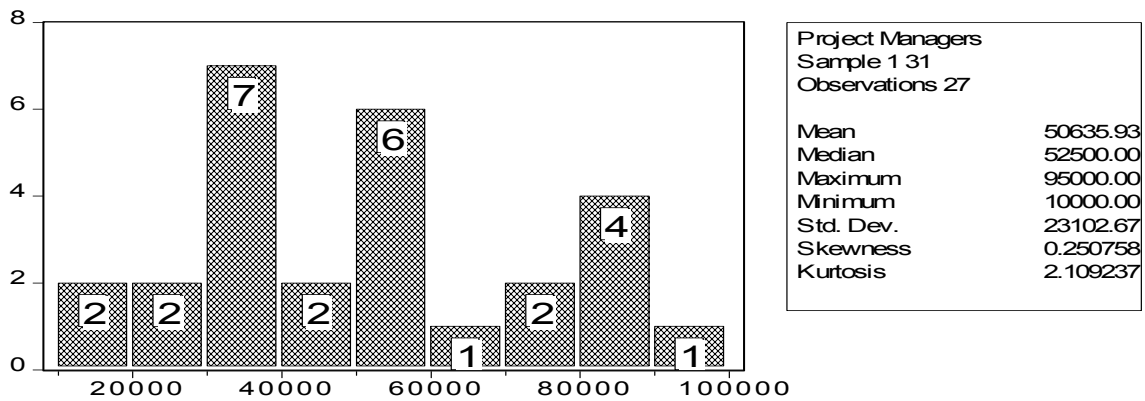
5.1.4 Project Managers

This role provides strategic direction to the program based work in the organization. The position also ensures the micro-macro linkages and has the primary responsibility for ensuring learning and mutual responsibility at all levels.

The experience of these personnel starts from seven years and more in above-mentioned skills. The Project Manager leads and directs the work of the team and is expected to coordinate and liaise with field implementation teams. Being a senior management position in the organization, this role demands a high degree of participatory management skills and leadership qualities to reach the organization's objectives.

Compensation Structure of Project Managers

The average Gross Salary at Project Managers is Rs.50,635. The maximum salary at this level is Rs. 95,000 and minimum is Rs. 10,000. The table below shows salary bands at this level. A standard deviation (variation in salaries) of Rs. 23,102 exists at this level. The Skewness of 0.25 indicates that the distribution is less positively skewed as compare to zero for normal skewness. The Kurtosis 2.10 as compare to standard 3 shows that the distribution is relatively flat as compared to the normal. The entire statistic is visible from graph and table.



Sample: 1 31				
Included observations: 31				
Number of categories: 5				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	2	7.41	2	7.41
[20000, 40000)	9	33.33	11	40.74
[40000, 60000)	8	29.63	19	70.37
[60000, 80000)	3	11.11	22	81.48
[80000, 100000)	5	18.52	27	100.00
Total	27	100.00	27	100.00

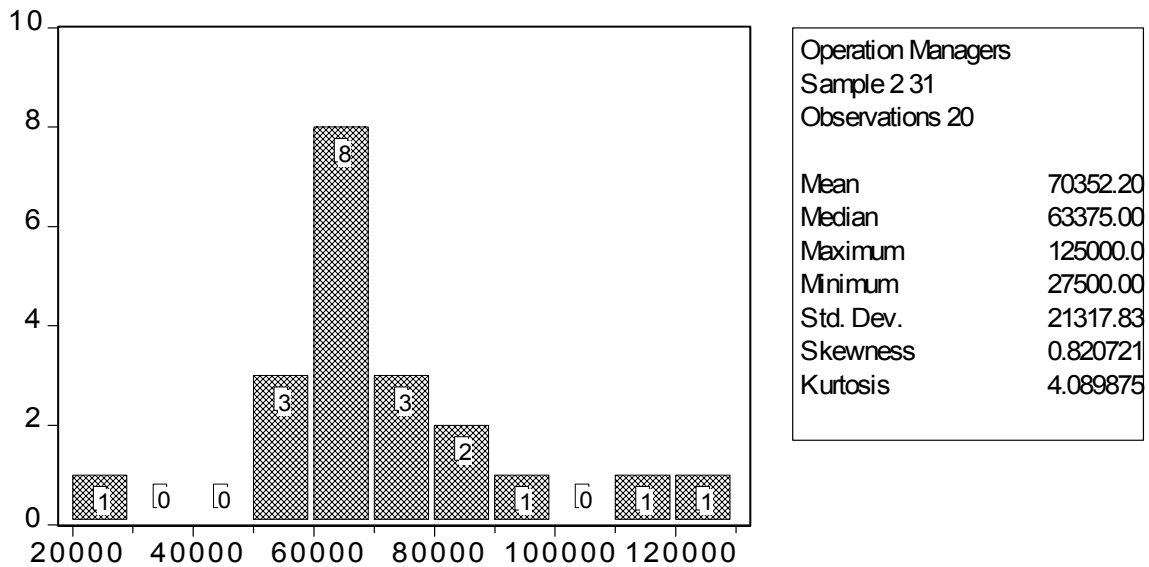
5.1.5 Operations Managers

This position contributes towards the organization’s strategic direction and monitors all managerial, administrative and program related activities in related operational offices. This role works in order to increase their capacity and infuse awareness of the broader vision in their planning and work.

In addition, the Operations Manager conceives and develops plans and is liable for Project Management, Resource Allocation and Quality Assurance. The experience of these personnel ranges from ten years and more in this particular field.

Compensation Structure of Operations Managers

The average Gross Salary of Operation Managers is Rs. 70,352. The maximum salary at this level is Rs. 125,000 and minimum is Rs. 27,500 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 21,317 exists at this level. The Skewness of 0.82 indicates that the distribution is positively skewed as Compare to zero for normal skewness. The Kurtosis 4.0 as compare to standard 3 shows that the distribution has high peak. The graph and table below also shows these entire statistics as explain above.



Sample: 1 31				
Included observations: 31				
Number of categories: 6				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[20000, 40000)	1	5.00	1	5.00
[40000, 60000)	3	15.00	4	20.00
[60000, 80000)	11	55.00	15	75.00
[80000, 100000)	3	15.00	18	90.00
[100000, 120000)	1	5.00	19	95.00
[120000, 140000)	1	5.00	20	100.00
Total	20	100.00	20	100.00

5.2 NON-IT PERSONNEL IN SOFTWARE COMPANIES WITH DOMESTIC / HYBRID BUSINESS

These personnel include support staff in this industry, performing important functions other than core activities of software development. These are categorized into Administration Managers, Human Resource Managers, Marketing Managers and Finance/Account Managers.

Overall the function of these personnel is similar in all categories of companies. The Non-IT personnel under these categories are not categorized with respect to number of years of experience, the minimum salary slots represent the new entrants with the designation of manager in many companies and the high salary slots represent the highly experienced managers in this particular field.

Qualification / Education

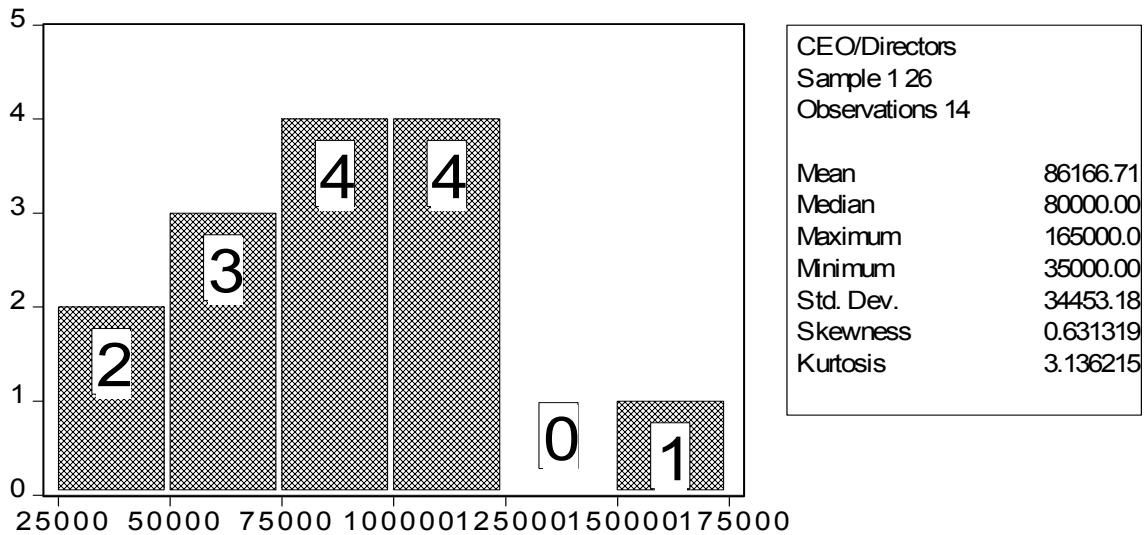
Generally, the education requirements found for the individuals at these levels are MBA, M.Com, C.A, BBA, and B.Com degrees.

5.2.1 CEO / COO / Directors

The experience of these personnel cannot be categorized. These are either highly experienced or qualified personnel from the software development industry. Generally they excel in activities like Project Management, Resource Allocation, Quality Assurance, Divisional Management and Administration, MIS applications, IT and GIS Business acquisition, Divisional Finance and Budget Management.

Compensation Structure of CEO / COO

The average Gross Salary of CEO/COO is Rs. 86,166. The maximum salary at this level is Rs. 165,000 and minimum is Rs. 35,000 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 34,453 exists at this level. The Skewness of 0.63 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 3.13 as compare to standard 3 shows that the distribution is approximately closed to normal distribution. The graph and table below also shows these entire statistics as explain above



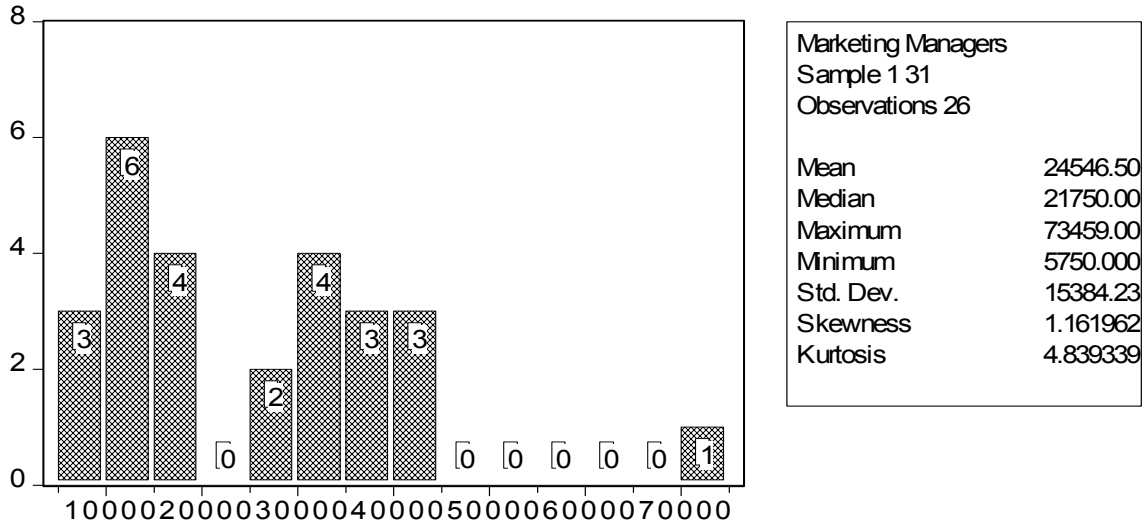
Sample: 1 31					
Included observations: 31					
Number of categories: 4					
	Value	Count	Percent	Cumulative Count	Cumulative Percent
	[0, 50000)	2	14.29	2	14.29
	[50000, 100000)	7	50.00	9	64.29
	[100000, 150000)	4	28.57	13	92.86
	[150000, 200000)	1	7.14	14	100.00
	Total	14	100.00	14	100.00

5.2.2 Marketing Managers

This function supports Preparing Marketing plans, Products promotion, Developing Product development strategies, developing market enhancement plans and Business promotion.

Compensation Structure of Marketing Managers

The average Gross Salary of Marketing Managers is Rs. 24,546. The maximum salary at this level is Rs. 73,459 and minimum is Rs. 5,750 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 15,384 exists at this level. The Skewness of 1.61 indicates that the distribution is highly positively skewed as compare to zero for normal skewness. The Kurtosis 4.83 as compare to standard 3 shows that the distribution is peaked relative to normal. The graph and table below also shows these entire statistic as explain above



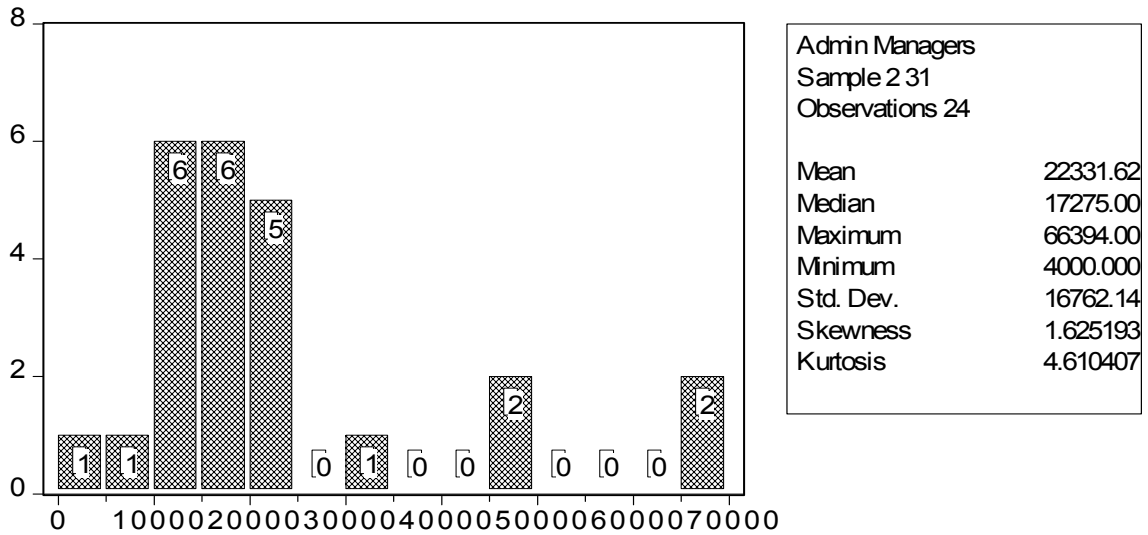
Sample: 1 31				
Included observations: 31				
Number of categories: 4				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	13	50.00	13	50.00
[20000, 40000)	9	34.62	22	84.62
[40000, 60000)	3	11.54	25	96.15
[60000, 80000)	1	3.85	26	100.00
Total	26	100.00	26	100.00

5.2.3 Administration Managers

This role supports implementation of rules & regulations, transport & tour (local & foreign) management, union affairs, dispatch management, resource allocation & protection, protocols and maintenance of personnel record.

Compensation Structure of Administration Managers

The average Gross Salary of Administration Managers is Rs. 23,331. The maximum salary at this level is Rs. 66,394 and minimum is Rs. 4,000, the reason for such large range is already described above. A standard deviation (variation in salaries) of Rs. 16,462 exists at this level. The Skewness of 1.62 indicates that the distribution is highly positively skewed as compare to zero for normal skewness. The Kurtosis 4.61 as compare to standard 3 shows that the distribution is highly peaked relative to normal. The graph and table below also shows these entire statistics as explain above



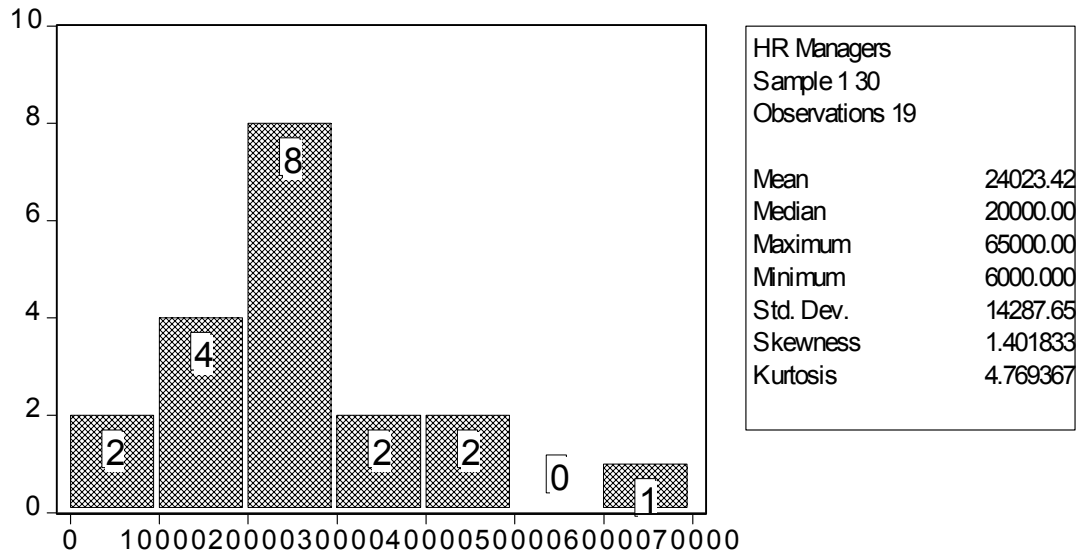
Sample: 1 31				
Included observations: 31				
Number of categories: 4				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	14	58.33	14	58.33
[20000, 40000)	6	25.00	20	83.33
[40000, 60000)	2	8.33	22	91.67
[60000, 80000)	2	8.33	24	100.00
Total	24	100.00	24	100.00

5.2.4 Human Resource Managers

This role supports all human resource functions in the organization like management, trainings, policies and compensation structure.

Compensation Structure of Human Resource Managers

The average Gross Salary of HR Managers is Rs. 24,023. The maximum salary at this level is Rs. 65000 and minimum is Rs. 6,000 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 14287 exists at this level. The Skewness of 1.40 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 4.76 as compare to standard 3 shows that the distribution is highly peaked relative to normal. The graph and table below also shows these entire statistics as explain above



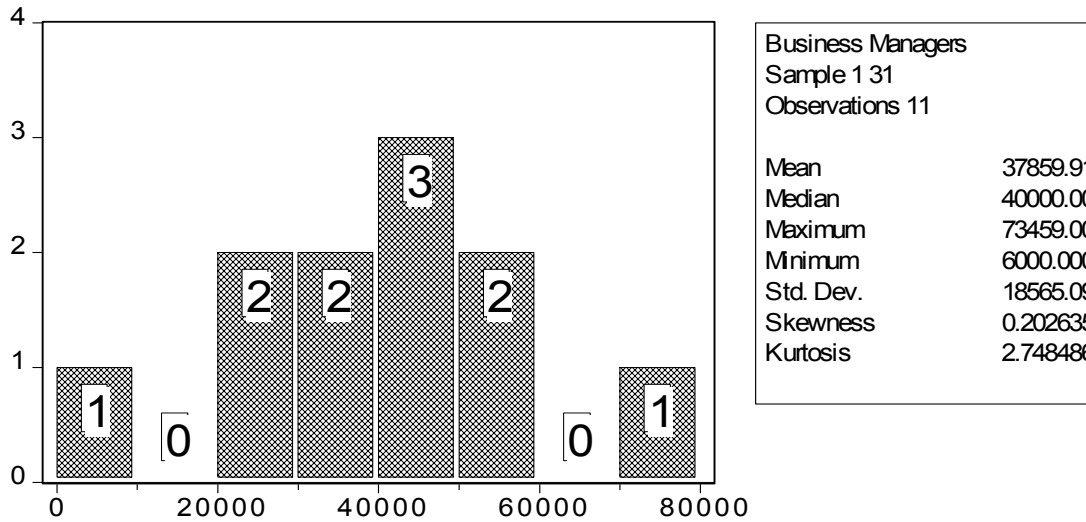
Sample: 1 31				
Included observations: 31				
Number of categories: 4				
	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	6	31.58	6	31.58
[20000, 40000)	10	52.63	16	84.21
[40000, 60000)	2	10.53	18	94.74
[60000, 80000)	1	5.26	19	100.00
Total	19	100.00	19	100.00

5.2.5 Business Managers

This role supports performance, acquisition, monitoring & evaluation of Company's business affairs.

Compensation Structure of Business Managers

The average Gross Salary of Business Managers is Rs. 37,859. The maximum salary at this level is Rs. 73,459 and minimum is Rs. 6,000 this large range at this level distinguish the education and number of experience put in by different individuals at this level. A standard deviation (variation in salaries) of Rs. 18,565 exists at this level. The Skewness of 0.20 indicates that the distribution is less positively skewed as compare to zero for normal skewness. The Kurtosis 2.74 as compare to standard 3 shows that the distribution is closed to normal. The graph and table below also shows these entire statistics as explain above.



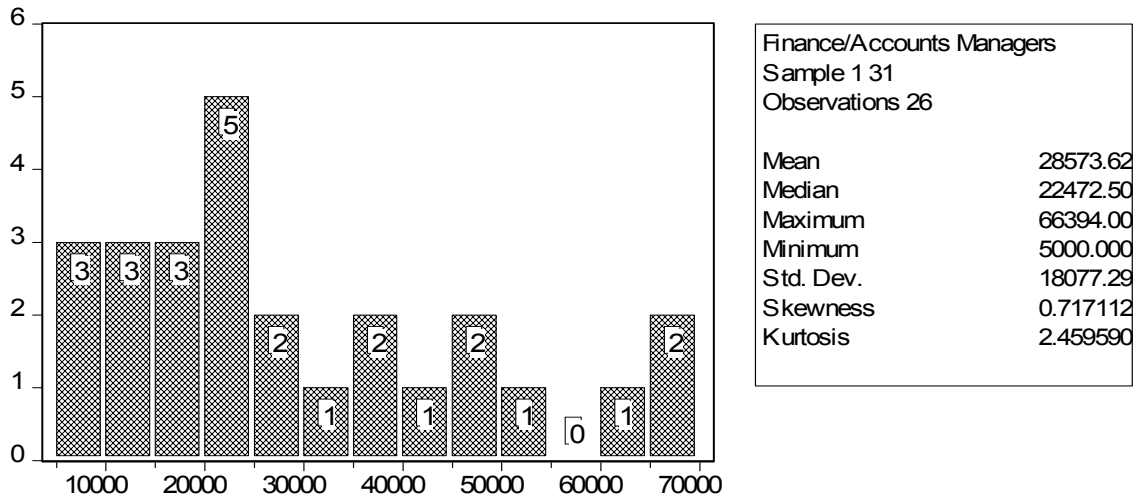
Sample: 1 31				
Included observations: 31				
Number of categories: 4				
	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	1	9.09	1	9.09
[20000, 40000)	4	36.36	5	45.45
[40000, 60000)	5	45.45	10	90.91
[60000, 80000)	1	9.09	11	100.00
Total	11	100.00	11	100.00

5.2.6 Finance Managers

This role supports Financial & reporting management, Maintenance of accounting record, Development and implementation of internal control system.

Compensation Structure of Finance Managers

The average Gross Salary of finance Managers is Rs. 28,573. The maximum salary at this level is Rs. 66,394 and minimum is Rs. 5,000 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 18,077 exists at this level. The Skewness of 0.71 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.45 as compare to standard 3 shows that the distribution is relatively flat to the normal. The graph and table below also shows these entire statistic as explain above



Sample: 1 31				
Included observations: 31				
Number of categories: 4				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	9	34.62	9	34.62
[20000, 40000)	10	38.46	19	73.08
[40000, 60000)	4	15.38	23	88.46
[60000, 80000)	3	11.54	26	100.00
Total	26	100.00	26	100.00

5.3 SUMMARY OF OVERALL COMPANIES WITH DOMESTIC/HYBRID BUSINESS:

The tables below represents overall summary under each hierarchy level.

5.3.1 IT Personnel

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO/Directors</i>
<i>Mean</i>	13143.04	22946.43	36764.58	50635.93	70352.20	86166.71
<i>Median</i>	11500.00	21750.00	35000.00	52500.00	63375.00	80000.00
<i>Maximum</i>	25000.00	45000.00	72500.00	95000.00	125000.0	165000.0
<i>Minimum</i>	5500.000	9000.000	13000.00	10000.00	27500.00	35000.00
<i>Std. Dev.</i>	5472.943	9891.391	15831.83	23102.67	21317.83	34453.18
<i>Skewness</i>	0.502283	0.520859	0.708953	0.250758	0.820721	0.631319
<i>Kurtosis</i>	2.117382	2.338878	3.122455	2.109237	4.089875	3.136215

5.3.2 Non –IT personnel

	<i>Marketing Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance Accounts Managers</i>
<i>Mean</i>	24546.50	22331.62	24023.42	37859.91	28573.62
<i>Median</i>	21750.00	17275.00	20000.00	40000.00	22472.50
<i>Maximum</i>	73459.00	66394.00	65000.00	73459.00	66394.00
<i>Minimum</i>	5750.000	4000.000	6000.000	6000.000	5000.000
<i>Std. Dev.</i>	15384.23	16762.14	14287.65	18565.09	18077.29
<i>Skewness</i>	1.161962	1.625193	1.401833	0.202635	0.717112
<i>Kurtosis</i>	4.839339	4.610407	4.769367	2.748486	2.459590

5.4 REGION-WISE SALARY COMPARISON OF PERSONNEL IN COMPANIES WITH DOMESTIC/HYBRID BUSINESS:

The following table represents the averages of gross salaries obtained from the companies in domestic/hybrid business in different regions of Islamabad, Lahore and Karachi respectively.

IT PERSONNEL IN SOFTWARE COMPANIES WITH DOMESTIC/HYBRID BUSINESS

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO / Directors</i>
<i>Mean (ISB)</i>	15647.92	27416.67	44366.00	59238.64	79877.78	76645.83
<i>Std. Dev.</i>	5293.354	9783.644	16750.64	27804.48	24607.10	52752.99
<i>Mean (LHR)</i>	13300.00	24300.00	39423.67	51424.17	59690.67	91489.75
<i>Std. Dev.</i>	5438.290	8438.009	15212.29	11870.55	23935.84	35688.36
<i>Mean (KHI)</i>	10138.89	18150.00	25600.00	40777.78	58750.00	77000.00
<i>Std. Dev.</i>	4758.399	9309.643	12562.73	21754.47	3227.486	7702.813

NON-IT PERSONNEL IN SOFTWARE COMPANIES WITH DOMESTIC/HYBRID BUSINESS

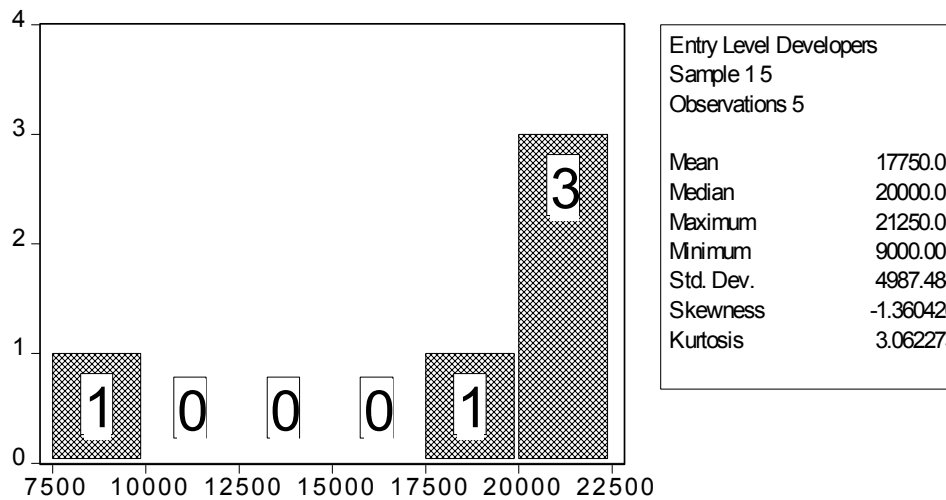
	<i>Marketing/Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance/Account s Managers</i>
<i>Mean(ISB)</i>	22200.00	22455.00	23594.50	40000.00	27040.45
<i>Std. Dev.</i>	13037.23	12891.57	13371.11	14252.19	15616.61
<i>Mean(LHR)</i>	34701.50	32815.67	30200.00	46729.50	40378.17
<i>Std. Dev.</i>	20210.75	25566.41	20330.40	37801.22	20612.14
<i>Mean(KHI)</i>	19300.00	12439.38	15875.00	25750.00	18466.67
<i>Std. Dev.</i>	12723.99	5985.826	6687.987	15840.35	12066.38

5.5 IT PERSONNEL IN SOFTWARE COMPANIES WITH EXPORT BUSINESS

In IT / Software companies with Export business, the standard hierarchy levels, education/qualification and experience/descriptions are equivalent as explained earlier for hierarchy levels in companies within domestic/hybrid business. However, there is a difference in gross salaries as identified and shown in analysis below:

5.5.1 Compensation Package of Entry Level Developers

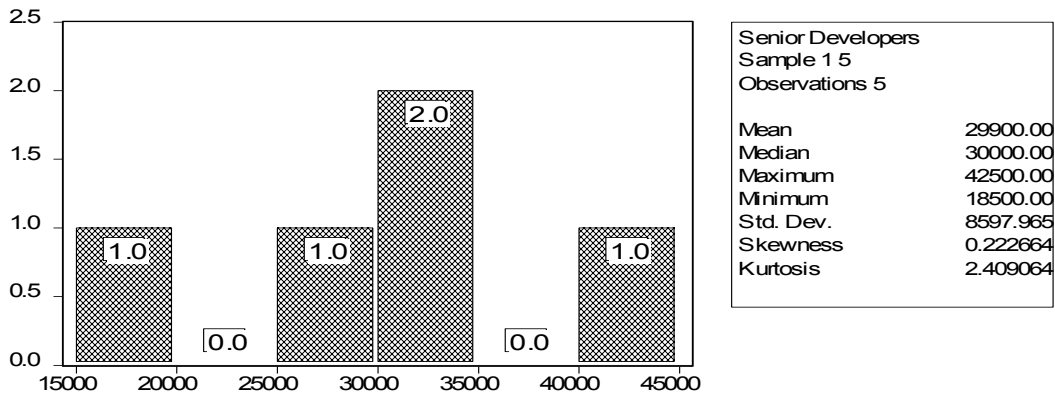
The average Gross Salary of entry level developers is Rs. 17,750. The maximum salary at this level is Rs. 21,250 and minimum is Rs. 9,000 this shows a range at this level in the business. A standard deviation (variation in salaries) of Rs. 4,987 exists at this level. The Skewness of -1.36 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 3.06 as compare to standard 3 shows that the distribution is closed relative to the normal. The graph and table below also shows these entire statistics as explain above.



Sample: 1 5				
Included observations: 5				
Number of categories: 3				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[5000, 10000)	1	20.00	1	20.00
[15000, 20000)	1	20.00	2	40.00
[20000, 25000)	3	60.00	5	100.00
Total	5	100.00	5	100.00

5.5.2 Compensation Package of Senior Developers

The average Gross Salary of Senior level is Rs. 29,900. The maximum salary at this level is Rs. 42,500 and minimum is Rs. 18,500 that showing a range at this level in the export business. A standard deviation (variation in salaries) of Rs. 8,598 exists at this level. The Skewness of 0.22 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.41 as compare to standard 3 shows that the distribution is less flat relative to the normal. The graph and table below also shows these entire statistics as explain above

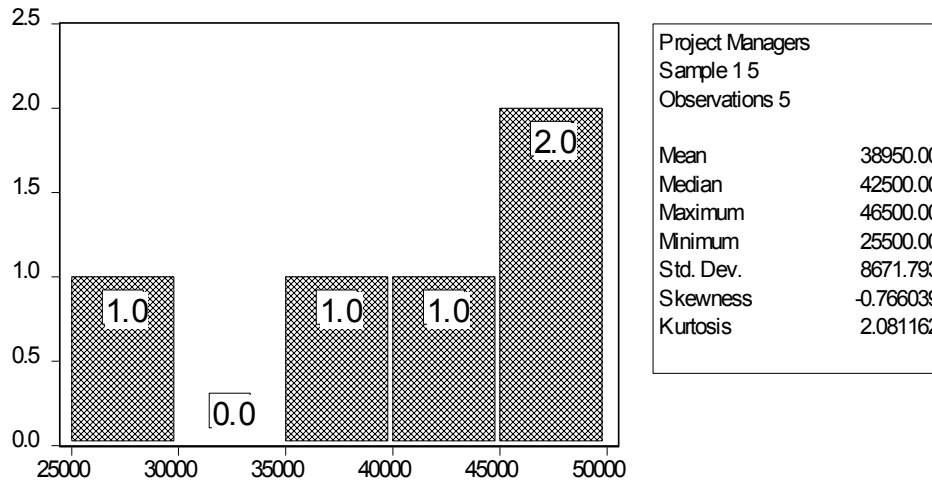


Sample: 1 5
Included observations: 5
Number of categories: 4

Value	Count	Percent	Cumulative Count	Cumulative Percent
[15000, 20000)	1	20.00	1	20.00
[25000, 30000)	1	20.00	2	40.00
[30000, 35000)	2	40.00	4	80.00
[40000, 45000)	1	20.00	5	100.00
Total	5	100.00	5	100.00

5.5.3 Compensation Package of Team Leads

The average Gross Salary found for Team Leads is Rs. 38,950. The maximum salary at this level is Rs. 46,500 and minimum is Rs. 25,500. A standard deviation (variation in salaries) of Rs. 8,672 exists at this level. The Skewness of -0.77 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 2.10 as compare to standard 3 shows that the distribution is flat as compared to the normal. The graph and table below also shows these entire statistics as explain above.

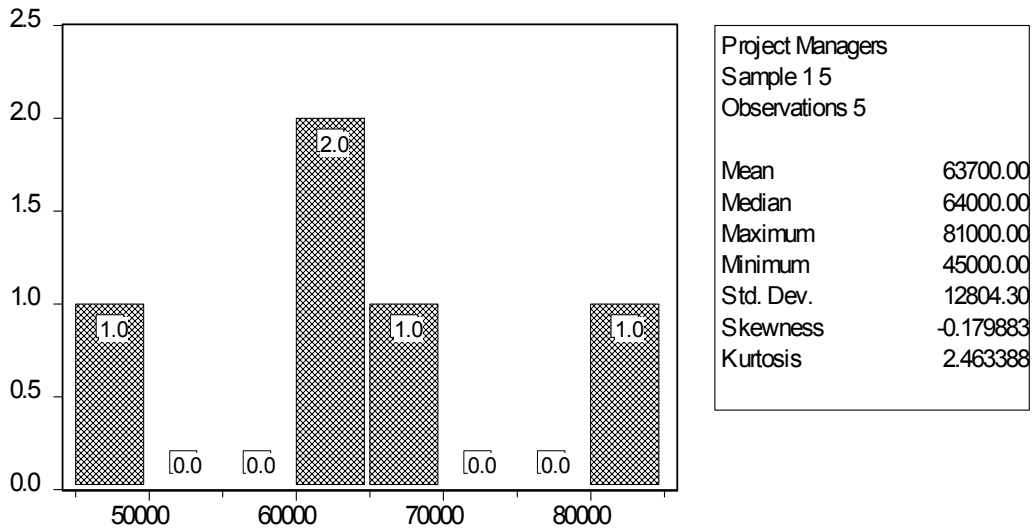


Sample: 1 5
Included observations: 5
Number of categories: 4

Value	Count	Percent	Cumulative Count	Cumulative Percent
[25000, 30000)	1	20.00	1	20.00
[35000, 40000)	1	20.00	2	40.00
[40000, 45000)	1	20.00	3	60.00
[45000, 50000)	2	40.00	5	100.00
Total	5	100.00	5	100.00

5.5.4 Compensation Package of Project Managers

The average Gross Salary of Project Managers is Rs. 63,700. The maximum salary at this level is Rs. 81,000 and minimum is Rs. 45,000 that shows a range at this level in the export business. A standard deviation (variation in salaries) of Rs. 12,804 exists at this level. The Skewness of -0.18 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 2.46 as compare to standard 3 shows that the distribution is closed relative to the normal. The graph and table below also shows these entire statistics as explain above.

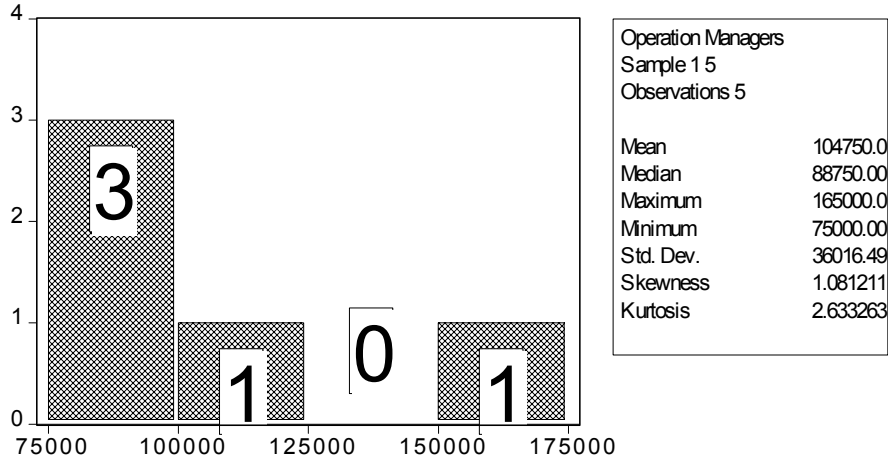


Sample: 1 5
Included observations: 5
Number of categories: 3

Value	Count	Percent	Cumulative Count	Cumulative Percent
[40000, 50000)	1	20.00	1	20.00
[60000, 70000)	3	60.00	4	80.00
[80000, 90000)	1	20.00	5	100.00
Total	5	100.00	5	100.00

5.5.5 Compensation Package of Operations Managers

The average Gross Salary of Operation Managers is Rs. 104,750. The maximum salary at this level is Rs. 165,000 and minimum is Rs. 75,000. A standard deviation (variation in salaries) of Rs. 36,017 exists at this level. The Skewness of 1.08 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.66 as compare to standard 3 shows that the distribution is closed relative to the normal. The graph and table below also shows these entire statistics as explain above



Sample: 15
Included observations: 5
Number of categories: 4

Value	Count	Percent	Cumulative Count	Cumulative Percent
[60000, 80000)	1	20.00	1	20.00
[80000, 100000)	2	40.00	3	60.00
[100000, 120000)	1	20.00	4	80.00
[160000, 180000)	1	20.00	5	100.00
Total	5	100.00	5	100.00

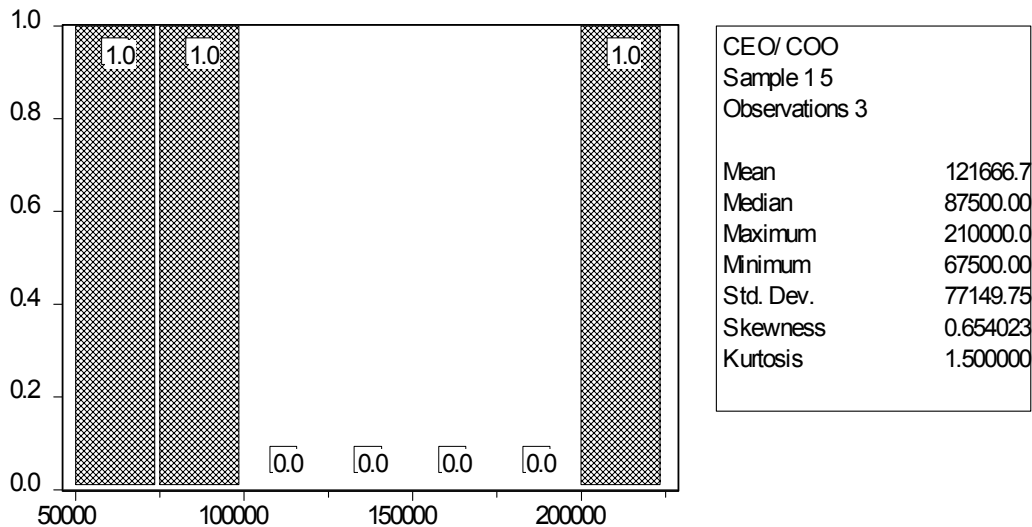
5.6 NON-IT PERSONNEL IN COMPANIES WITH EXPORT BUSINESS

For Non-IT personnel, the standard hierarchy levels, education/qualification and experience/descriptions are equivalent as explained earlier in companies with domestic/hybrid business. However, there is a difference in gross salaries as and shown in analysis below:

A large variation in the salaries of Non-IT hierarchy levels is found because these levels do not show experience bases. The lower limit of salaries indicates personnel with none or little experience whereas the upper limit of salaries in these non-IT individuals indicate well groomed and experienced individuals.

5.6.1 Compensation Package of CEO / COO / Directors

The average Gross Salary of Chief executive officers, chief operating officers and directors are found Rs. 121,667. The maximum salary at this level is Rs. 210,000 and minimum is Rs. 67,500. A standard deviation (variation in salaries) of Rs. 77,150 exists at this level. The Skewness of 0.65 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 1.5 as compare to standard 3 shows that the distribution is flat. The graph and table below also shows these entire statistics as explained above.

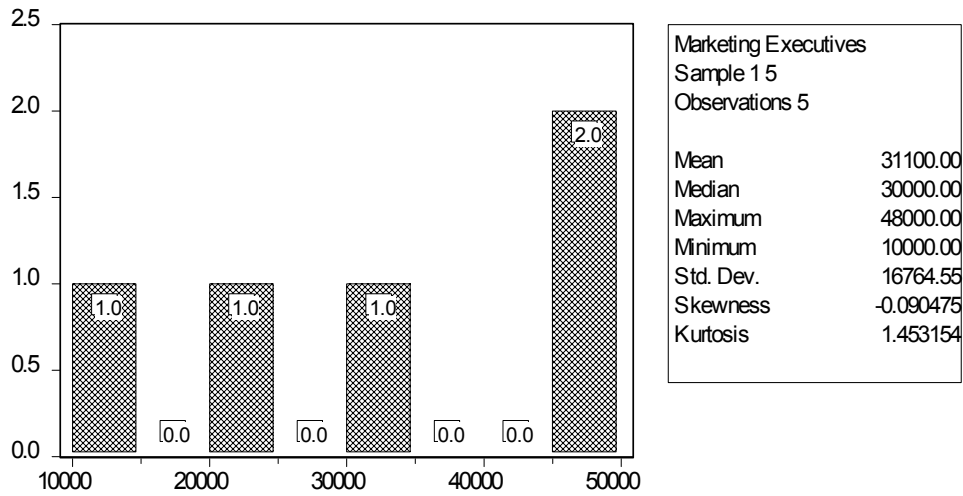


Sample: 15
Included observations: 5
Number of categories: 2

Value	Count	Percent	Cumulative Count	Cumulative Percent
[50000, 100000)	2	66.67	2	66.67
[200000, 250000)	1	33.33	3	100.00
Total	3	100.00	3	100.00

5.6.2 Compensation Package of Marketing Executives

The average Gross Salary of Marketing Executives is Rs. 31,100. The maximum salary at this level is Rs. 48,000 and minimum is Rs. 10,000. A standard deviation (variation in salaries) of Rs. 16,765 exists at this level. The Skewness of -0.09 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 1.45 as compare to standard 3 shows that the distribution is really flat to the normal. The graph and table below also shows these entire statistics as explained above.



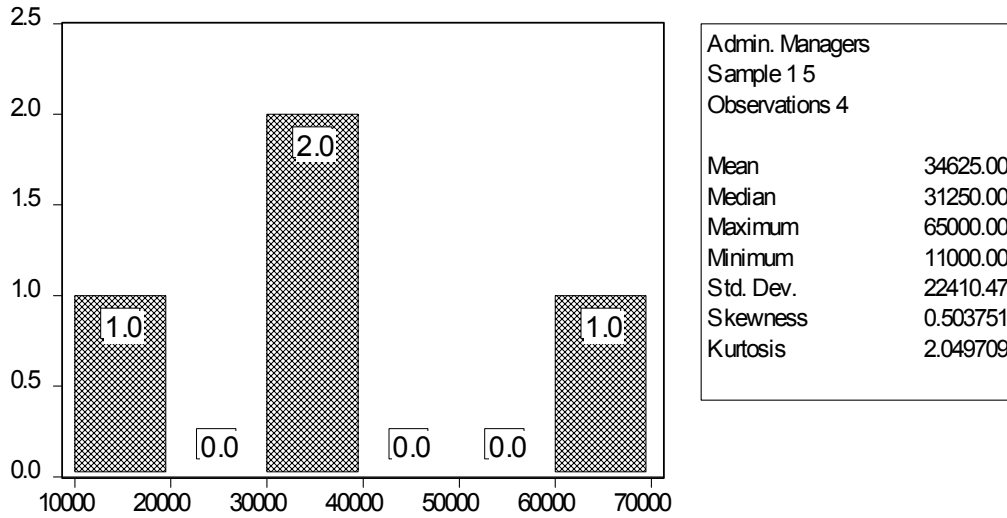
Sample: 1 5
Included observations: 5
Number of categories: 4

Value	Count	Percent	Cumulative Count	Cumulative Percent
[10000, 20000)	1	20.00	1	20.00
[20000, 30000)	1	20.00	2	40.00
[30000, 40000)	1	20.00	3	60.00
[40000, 50000)	2	40.00	5	100.00
Total	5	100.00	5	100.00

5.6.3 Compensation Package of Administration Managers

The average Gross Salary of Administration Managers is Rs. 34,625. The maximum salary at this level is Rs. 65,000 and minimum is Rs. 11,000. A standard deviation (variation in salaries) of Rs. 22,410 exists at this level. The Skewness of 0.50 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.05 as compare to standard 3 shows that the distribution is less flat relative to

the normal. The graph and table below also shows these entire statistics as explained above.

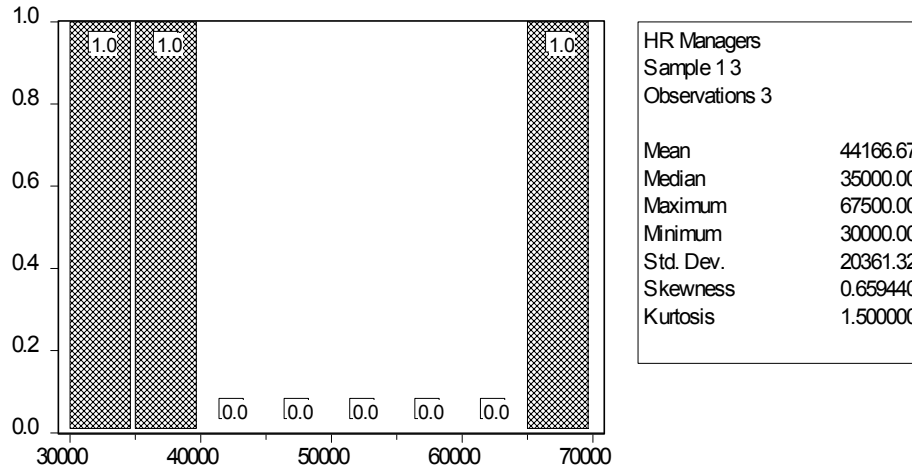


Sample: 1 5
Included observations: 5
Number of categories: 3

Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	1	25.00	1	25.00
[20000, 40000)	2	50.00	3	75.00
[60000, 80000)	1	25.00	4	100.00
Total	4	100.00	4	100.00

5.6.4 Compensation Package of Human Resource Managers

The average Gross Salary of HR Managers is Rs. 44,167. The maximum salary at this level is Rs. 67,500 and minimum is Rs. 30,000. A standard deviation (variation in salaries) of Rs. 20,361 exists at this level. The Skewness of 0.66 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 1.5 as compare to standard 3 shows that the distribution is flat relative to the normal. The graph and table below also shows these entire statistics as explained above.

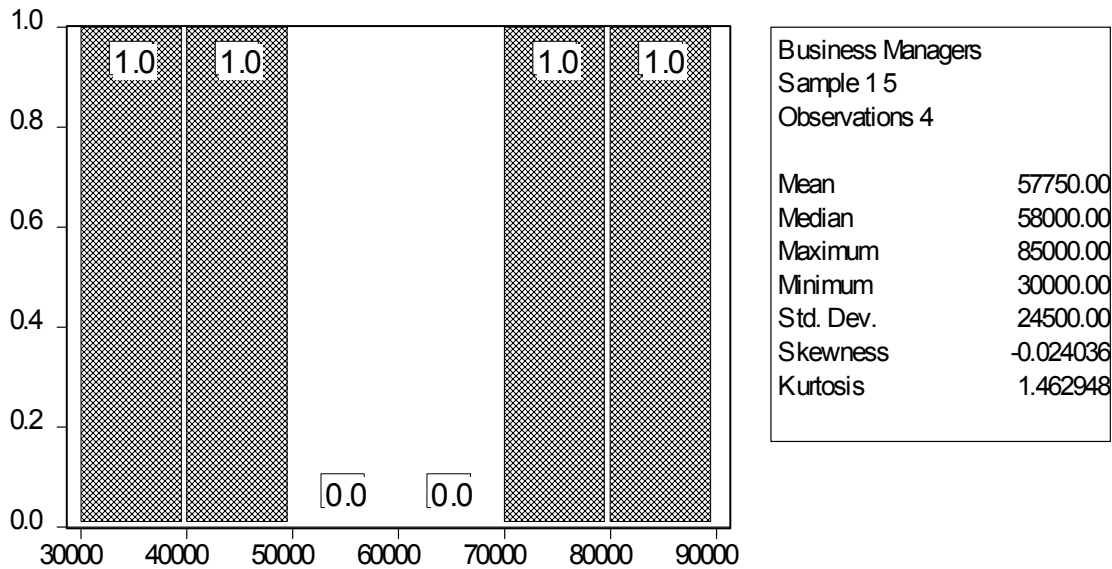


Sample: 1 5
Included observations: 5
Number of categories: 2

Value	Count	Percent	Cumulative Count	Cumulative Percent
[30000, 40000)	2	67	2	67
[60000, 70000)	1	33	3	100
Total	3	100	3	100

5.6.5 Compensation Package of Business Managers

The average Gross Salary of Business Managers is Rs. 57,750. The maximum salary at this level is Rs. 85,000 and minimum is Rs. 30,000. A standard deviation (variation in salaries) of Rs. 24,500 exists at this level. The skewness of -0.024 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 1.4 as compare to standard 3 shows that the distribution is flat as compared to the normal. The graph and table below also shows these entire statistics as explained above.



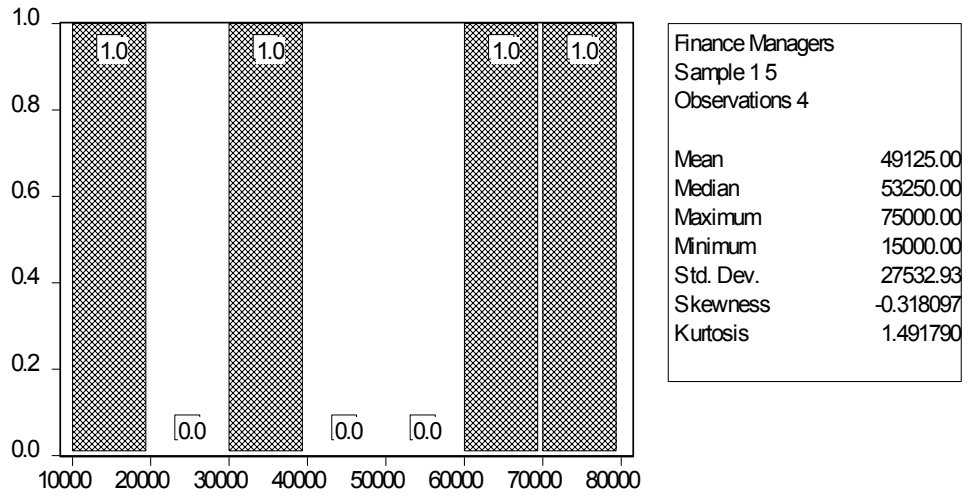
Sample: 15
Included observations: 5
Number of categories: 4

Value	Count	Percent	Cumulative Count	Cumulative Percent
[20000, 40000)	1	25.00	1	25.00
[40000, 60000)	1	25.00	2	50.00
[60000, 80000)	1	25.00	3	75.00
[80000, 100000)	1	25.00	4	100.00
Total	4	100.00	4	100.00

5.6.6 Compensation Package of Finance Managers

The average Gross Salary of Finance Managers is Rs. 49,125. The maximum salary at this level is Rs. 75,000 and minimum is Rs. 15,000. A standard deviation (variation in salaries) of Rs. 27,533 exists at this level. The Skewness of -0.32 indicates that the distribution is negatively skewed as compare to zero for normal skewness. The Kurtosis 1.5 as compare to standard 3 shows that the distribution is flat relative to the normal. The graph and table below also shows these entire statistics as explained above.

**Compensation Survey of IT and ITES Industry
Pakistan Software Export Board**



Sample: 1 5
 Included observations: 5
 Number of categories: 3

Value	Count	Percent	Cumulative Count	Cumulative Percent
[0, 20000)	1	25.00	1	25.00
[20000, 40000)	1	25.00	2	50.00
[60000, 80000)	2	50.00	4	100.00
Total	4	100.00	4	100.00

5.7 SUMMARY OF AVERAGES OBTAINED FROM COMPANIES WITH EXPORT BUSINESS

The following table shows the summary of overall analysis explained above with graphs and tables.

5.7.1 IT Personnel

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO Directors</i>
<i>Mean</i>	17750.00	29900.00	38950.00	63700.00	104750.0	121666.7
<i>Median</i>	20000.00	30000.00	42500.00	64000.00	88750.00	87500.00
<i>Maximum</i>	21250.00	42500.00	46500.00	81000.00	165000.0	210000.0
<i>Minimum</i>	9000.000	18500.00	25500.00	45000.00	75000.00	67500.00
<i>Std. Dev.</i>	4987.484	8597.965	8671.793	12804.30	36016.49	77149.75
<i>Skewness</i>	-1.360426	0.222664	-0.766039	-0.179883	1.081211	0.654023
<i>Kurtosis</i>	3.062273	2.409064	2.081162	2.463388	2.633263	1.500000

5.7.2 Non-IT Personnel

	<i>Marketing/Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance/Accounts Managers</i>
<i>Mean</i>	31100.00	34625.00	44166.67	57750.00	49125.00
<i>Median</i>	30000.00	31250.00	35000.00	58000.00	53250.00
<i>Maximum</i>	48000.00	65000.00	67500.00	85000.00	75000.00
<i>Minimum</i>	10000.00	11000.00	30000.00	30000.00	15000.00
<i>Std. Dev.</i>	16764.55	22410.47	20361.32	24500.00	27532.93
<i>Skewness</i>	-0.090475	0.503751	0.659440	-0.024036	-0.318097
<i>Kurtosis</i>	1.453154	2.049709	1.500000	1.462948	1.491790

5.8 REGION-WISE SALARY COMPARISON OF PERSONNEL IN EXPORT BUSINESS COMPANIES:

The following table represents the averages of gross salaries obtained from the companies in export business in different regions of Islamabad, Lahore, and Karachi respectively. Above overall averages are already defined.

IT PERSONNEL IN SOFTWARE COMPANIES WITH EXPORT BUSINESS

	<i>Entry Level Developers</i>	<i>Senior Developers</i>	<i>Team Leads</i>	<i>Project Managers</i>	<i>Operation Managers</i>	<i>CEO / Directors</i>
<i>Mean(ISB)</i>	21250.00	42500.00	46500.00	62500.00	88750.00	67500.00
<i>Mean(LHR)</i>	19250.00	28750.00	40125.00	65000.00	92500.00	NA
<i>Mean(KHI)</i>	14500.00	24750.00	34000.00	63000.00	125000.0	148750.0

NON-IT PERSONNEL

	<i>Marketing/Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance/Account s Managers</i>
<i>Mean (ISB)</i>	47500.00	32500.00	35000.00	30000.00	67500.00
<i>Mean(LHR)</i>	39000.00	47500.00	48750.00	70000.00	57000.00
<i>Mean(KHI)</i>	15000.00	11000.00	NA	65500.00	15000.00

5.9 CORE ACTIVITY PERSONNEL IN CALL CENTERS

In order to make accurate comparisons in Call Center Industry, the following standard hierarchy levels and descriptions are identified in the industry and further analysis is mentioned accordingly:

The difference between the sample observations and total count in the tables is occurring due to the fact that certain companies (survey recipients) do not carry these designations.

Education / Qualifications of Core Activity Personnel

Generally, the call center industry requires the individuals to have High School, Graduation or Master degree. They are required to possess Native North American or British Accent in addition to marketing, management, and analytical skills.

By and large the experience requirement increases with the hierarchy levels, however, the organizations are indifferent where capabilities of the individuals in some way or the other to offer a higher level with respect to experience.

5.9.1 Call Center Agents/Representatives

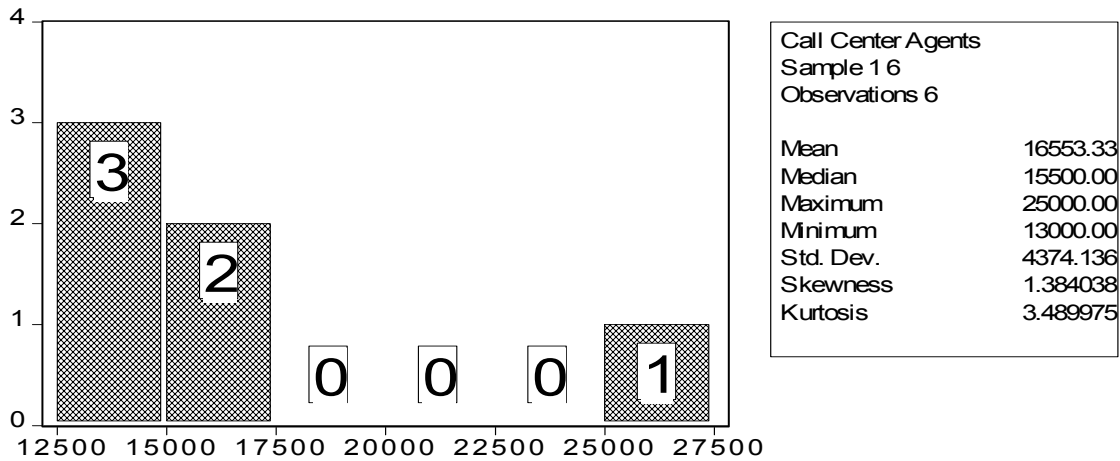
The role of Call Center Agents is core activity of call center industry. These personnel do telemarketing and are involved in providing telephone answering service, order taking, and sales calls.

Companies usually hire candidates at this position with experience in sales/marketing however incumbents with good Native American or British accent with no experience are also inducted on a slight training basis of almost a week.

Compensation Package of Call Center Agents

The average Gross Salary for Call Center Agents is Rs. 16,553. The maximum salary at this level is Rs. 25,000 and minimum salary found is Rs. 13,000 in call center industry. A standard deviation (variation in salaries) of Rs. 4,374 exists at this level. The Skewness of 1.3 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 3.4 is closed to 3 as it is standard for normal distribution. It shows that the distribution is relative to the normal. The graph and table below also shows these entire statistics as explained above.

Sample: 16				
Included observations: 6				
Number of categories: 3				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[10000, 15000)	3	50.00	3	50.00
[15000, 20000)	2	33.33	5	83.33
[25000, 30000)	1	16.67	6	100.00
Total	6	100.00	6	100.00

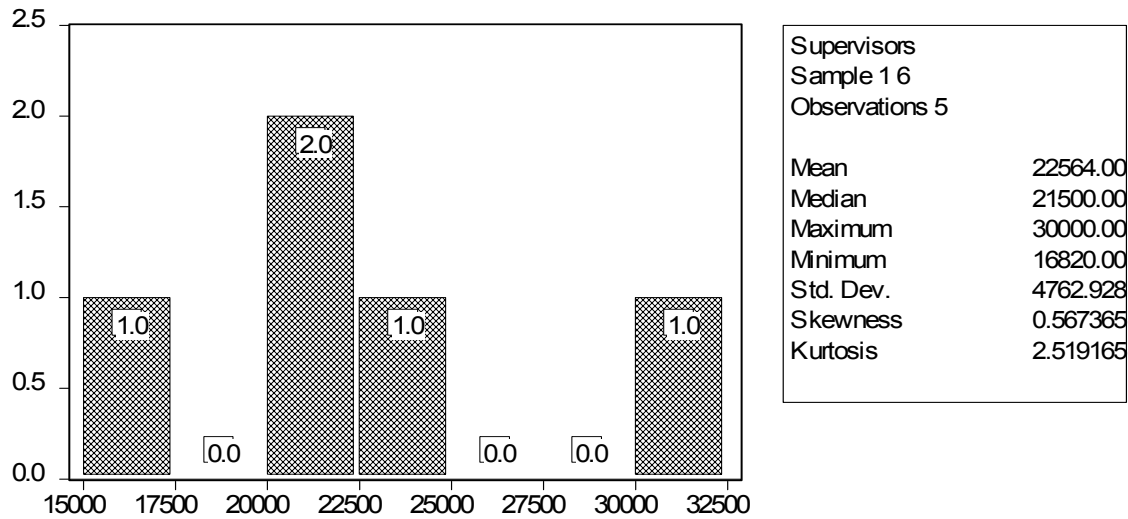


5.9.2 Call Center Supervisors

Call center supervisors are providing trainings and quality assurance services and possess skills like native North American or British Accent, coaching skills, teamwork, discipline and time management.

Compensation Package of Supervisors

The average Gross Salary found for Supervisors is Rs. 22,564. The maximum salary at this level is Rs. 30,000 and minimum is Rs. 16,820 in the call center business. A standard deviation (variation in salaries) of Rs. 4,762 exists at this level. The Skewness of 0.5 indicates that the distribution is positively skewed as compared to zero for normal skewness. The Kurtosis 2.5 shows that the distribution is flat and less relative to the normal. The graph and table below also show these entire statistics as explained above.



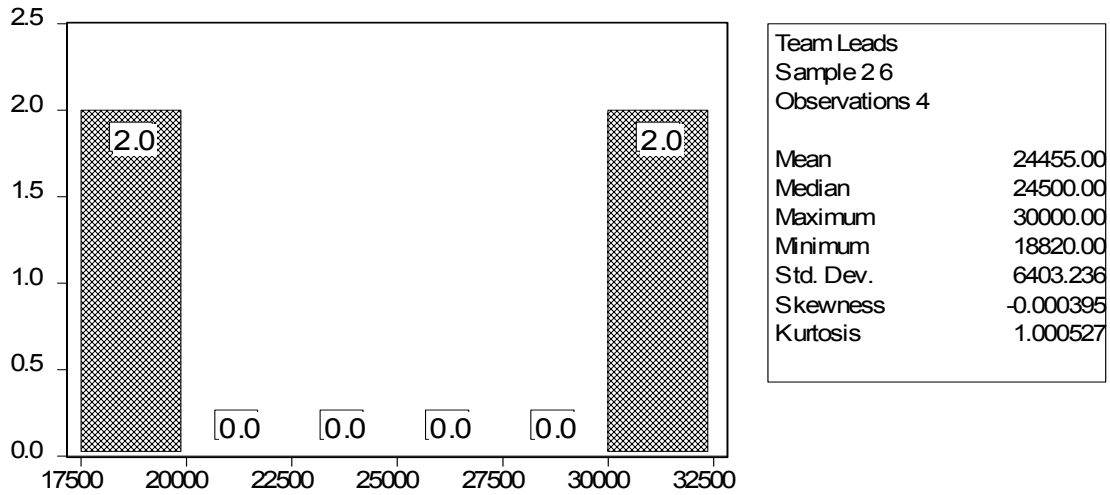
Sample: 1 6				
Included observations: 6				
Number of categories: 3				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[15000, 20000)	1	20.00	1	20.00
[20000, 25000)	3	60.00	4	80.00
[30000, 35000)	1	20.00	5	100.00
Total	5	100.00	5	100.00

5.9.3 Team Leads

Team Leads specifically manages the teams under different projects with skills like Native North American or British Accent, Analytical – ability to examine problems effectively and evaluate alternate solutions.

Compensation Package of Team Leads

The average Gross Salary of team leads is Rs. 24,455. The maximum salary at this level is Rs. 30,000 and minimum is Rs. 18,820, the range can be distinguished for this level in the call center business. A standard deviation (variation in salaries) of Rs. 6,403 exists at this level. The Skewness of 0 indicates that the distribution is high positively. The Kurtosis 1 shows that the distribution is flat relative to the normal as 3 is a standard. The graph and table below also shows these entire statistics as explained above.



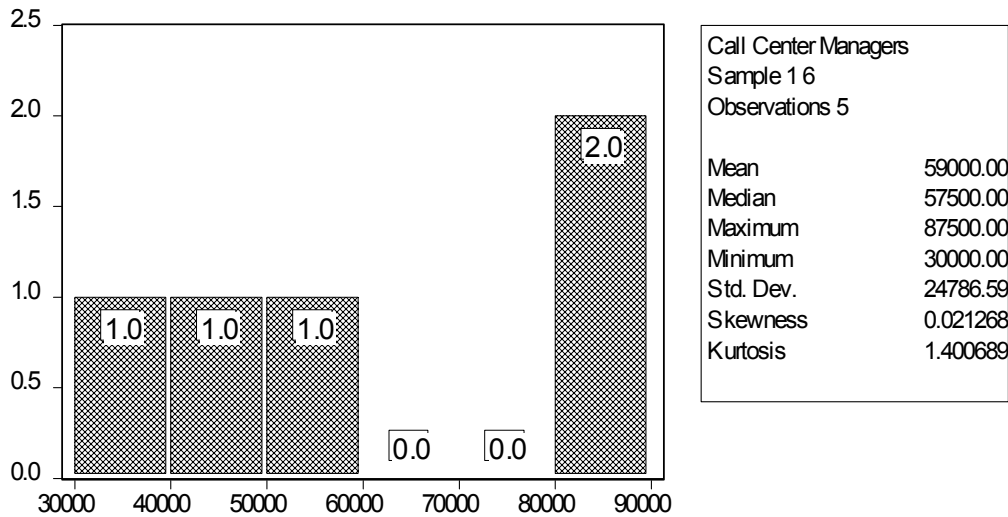
Sample: 1 6				
Included observations: 6				
Number of categories: 2				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[15000, 20000)	2	50.00	2	50.00
[30000, 35000)	2	50.00	4	100.00
Total	4	100.00	4	100.00

5.9.4 Call Center Managers

Managers are there for Operational Management. They possess Native North American or British Accent with strong marketing management background, including Consumer services (call center) and Consumer relationship management.

Compensation Package of Call Center Managers

The average Gross Salary of call centers managers is Rs. 59,000. The maximum salary at this level is Rs. 87,500 and minimum is Rs. 30,000 that shows a large range at this level in call center business. A standard deviation (variation in salaries) of Rs. 24,786 exists at this level. The Skewness of 0.021 indicates that the distribution is high negatively skewed as compare to zero for normal skewness. The Kurtosis 1.40 shows that the distribution is flat relative to the normal as standard are 3. The graph and table blow also shows these entire statistics as explained above.



Sample: 1 6				
Included observations: 6				
Number of categories: 3				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[20000, 40000)	1	20.00	1	20.00
[40000, 60000)	2	40.00	3	60.00
[80000, 100000)	2	40.00	5	100.00
Total	5	100.00	5	100.00

5.10 SUPPORT PERSONNEL IN CALL CENTERS

These personnel include support staff in this industry, performing important functions other than core activities of sales/marketing. These are categorized into Administration Managers, Human Resource Managers, Marketing Managers and Finance/Account Managers.

Overall the function of these personnel is similar as in other categories of companies. The Non-IT personnel under these categories are not categorized with respect to number of years of experience. The minimum salary slots represent the new entrants with the designation of manager in many companies and the high salary slots represent the highly experienced managers in this particular field.

Qualification / Education

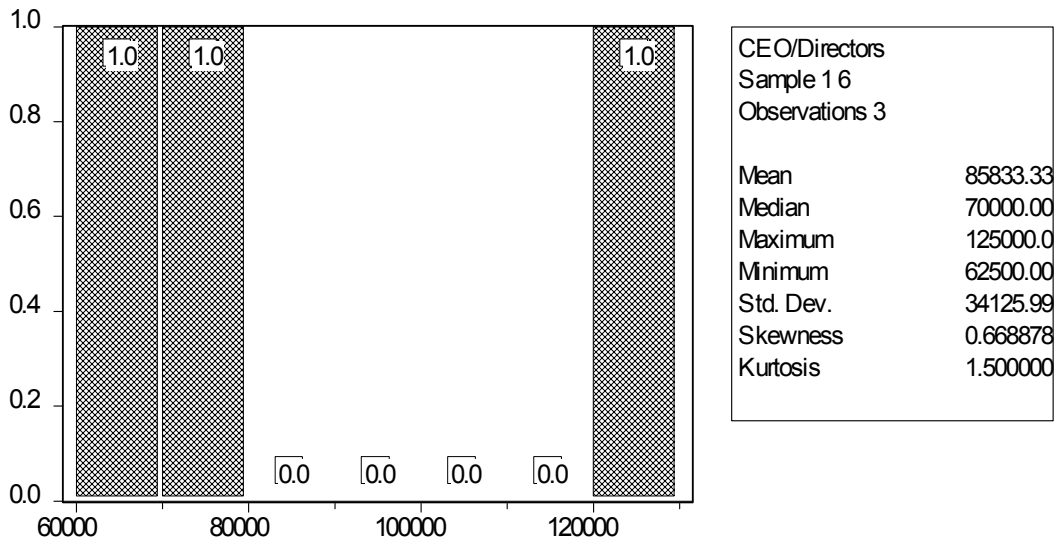
Generally, the education requirements found for the individuals at these levels are MBA, M.Com, C.A, BBA and B.Com degrees.

5.10.1 CEO / COO / Directors

They are involved in strategic decision making, possess native North American or British accent. Generally, they have strong background in marketing management, including consumer services (call center) and strategic decision-making.

Compensation Package of CEO / Directors

The average Gross Salary of CEO/COO is Rs. 85,933. The maximum salary at this level is Rs. 125,000 and minimum is Rs. 62,500 that shows a range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 34,125 exists at this level. The Skewness of 0.66 indicates that the distribution is positively skewed as compared to zero for normal skewness. The Kurtosis 1.50 shows that the distribution is flat relative to the normal as standard is 3. The graph and table below also show these entire statistics as explained above



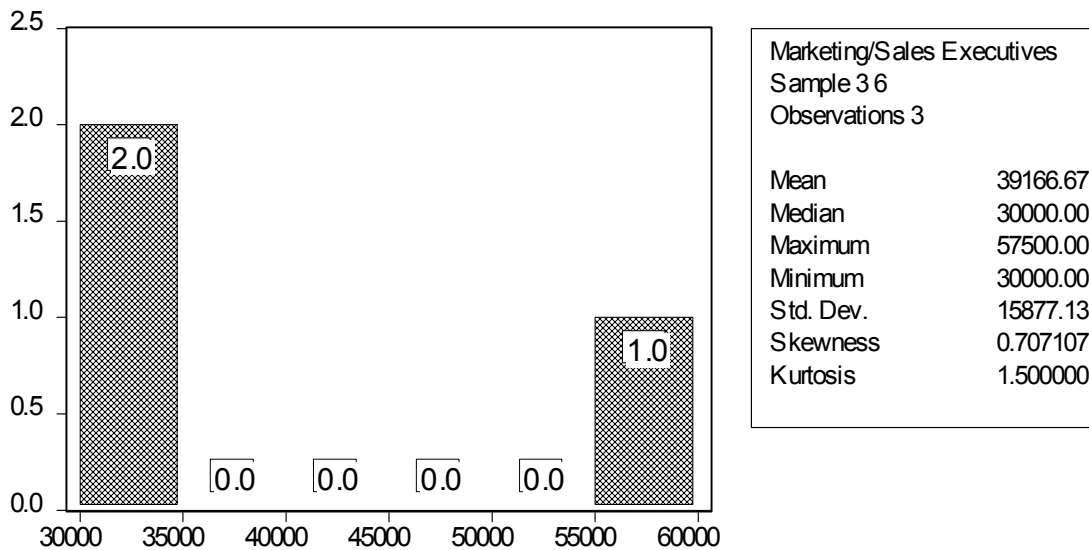
Sample: 16				
Included observations: 6				
Number of categories: 2				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[60000, 80000)	2	66.67	2	66.67
[120000, 140000)	1	33.33	3	100.00
Total	3	100.00	3	100.00

5.10.2. Marketing Executives

The role of this position in client relation management. For this position good communication skills are required with marketing & sales background.

Compensation Package

The average Gross Salary of Marketing Executives is Rs. 39,166. The maximum salary at this level is Rs. 57,500 and minimum is Rs. 30,000 that shows a range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 15,877 exists at this level. The Skewness of 0.70 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 1.50 show that the distribution is flat relative to the normal as standard is 3. The graph and table below also shows these entire statistics as explained above.



Sample: 1 6				
Included observations: 6				
Number of categories: 2				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
30000	2	66.67	2	66.67
57500	1	33.33	3	100.00
Total	3	100.00	3	100.00

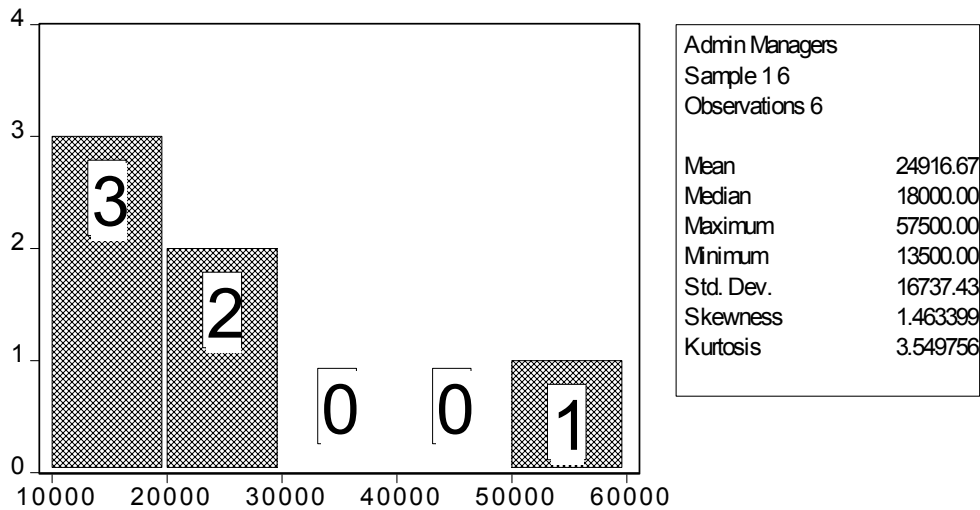
5.10.3 Administrations Managers

The position is assigned to supervise and coordinate overall administrative activities for the Administration department mainly in all the organizations. Moreover, good

communication skills, ability to think ahead, organize, manage multiple priorities and planning is a requirement for administration managers.

Compensation Package

The average Gross Salary of Admin Managers is Rs. 24,916. The maximum salary at this level is Rs. 57,500 and minimum is Rs. 13,500 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 16,737 exists at this level. The Skewness of 1.4 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 3.54 show that the distribution is peaked relative to the normal as standard is 3. The graph and table below also shows these entire statistics as explained above.



Sample: 1 6				
Included observations: 6				
Number of categories: 3				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[10000, 20000)	3	50.00	3	50.00
[20000, 30000)	2	33.33	5	83.33
[50000, 60000)	1	16.67	6	100.00
Total	6	100.00	6	100.00

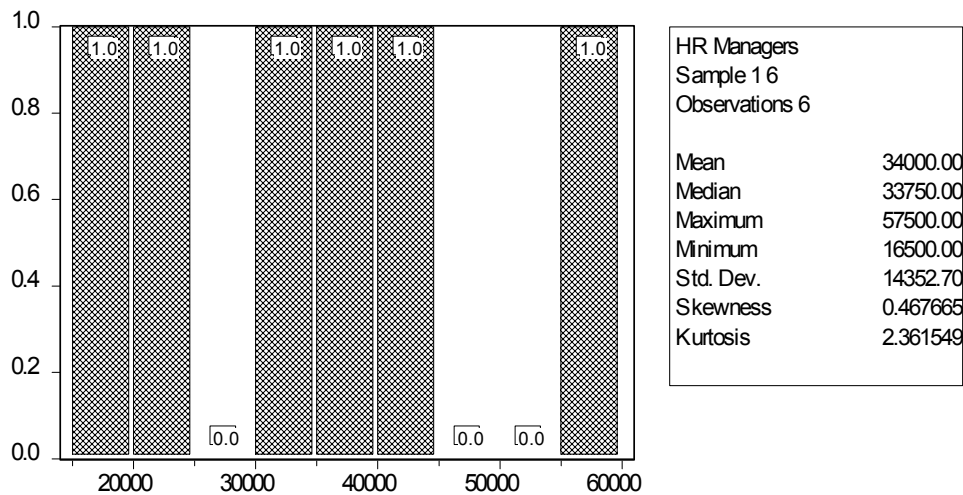
5.10.4 Human Resource Managers

This position is found performing the analysis, maintenance, and communication of records required by law or local governing bodies, or other departments in the

organization. HR background with some exposure in setting up systems & policies in a start up organization is used to be a standard for such positions. Communication, both oral and written are supporting for this positions.

Compensation Package

The average Gross Salary of HR manager is Rs. 34,000. The maximum salary at this level is Rs. 57,500 and minimum is Rs. 16,500 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 14353 exists at this level. The Skewness of 0.47 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 2.36 shows that the distribution is relative to the normal. The graph and table below also shows these entire statistics as explained above.



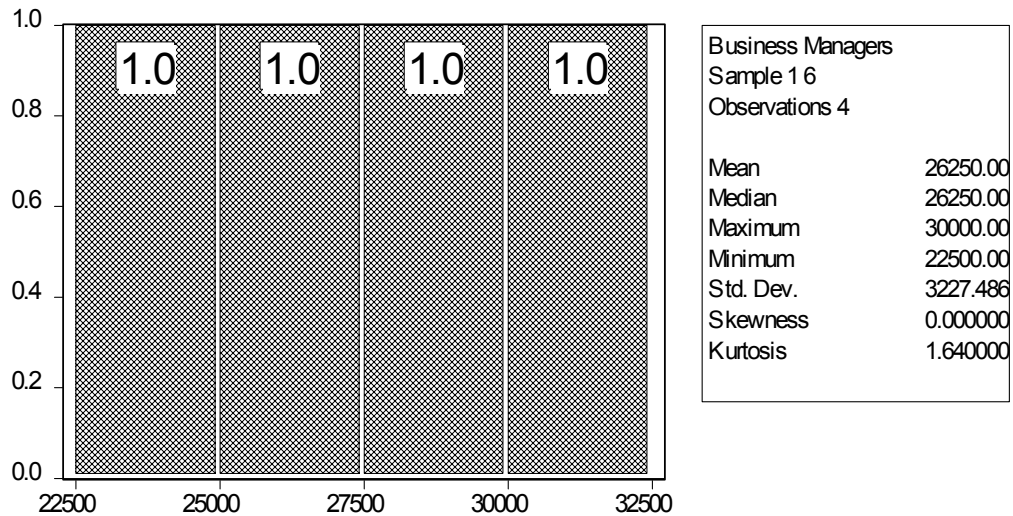
Sample: 16				
Included observations: 6				
Number of categories: 5				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[10000, 20000)	1	16.67	1	16.67
[20000, 30000)	1	16.67	2	33.33
[30000, 40000)	2	33.33	4	66.67
[40000, 50000)	1	16.67	5	83.33
[50000, 60000)	1	16.67	6	100.00
Total	6	100.00	6	100.00

5.10.5 Business Managers

This role is responsible for Business Development in call centers. The pre-requisites for this position are good communication, analytical and marketing skills.

Compensation Package

The average Gross Salary of Business Managers is Rs. 26,250. The maximum salary at this level is Rs. 30,000 and minimum is Rs. 22,500 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 3,227 exists at this level. The Skewness of 0 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 1.64 show that the distribution is relative to the normal as standard is 3. The graph and table below also shows these entire statistics as explained above.



Sample: 16				
Included observations: 6				
Number of categories: 4				
Value	Count	Percent	Cumulative Count	Cumulative Percent
[22000, 24000)	1	25.00	1	25.00
[24000, 26000)	1	25.00	2	50.00
[26000, 28000)	1	25.00	3	75.00
[30000, 32000)	1	25.00	4	100.00
Total	4	100.00	4	100.00

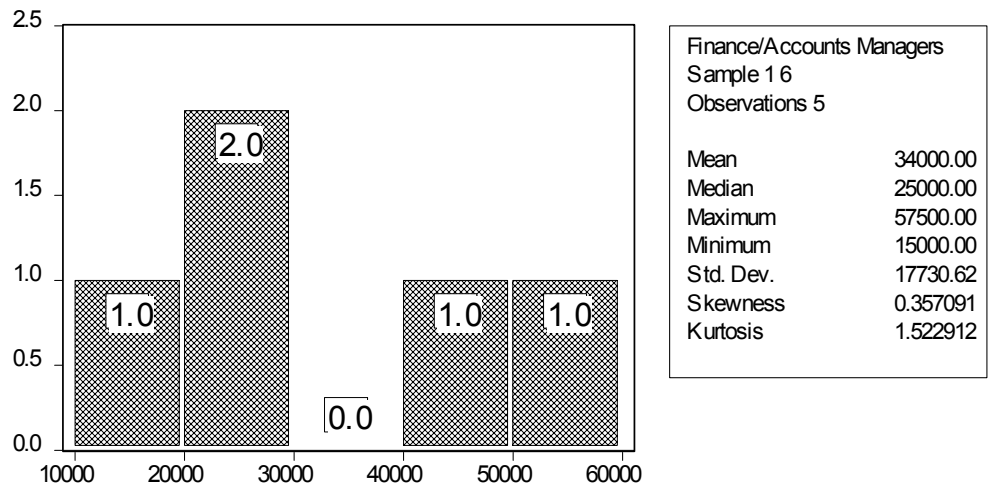
5.10.6 Finance Managers

Finance Managers are responsible for Analyzing and appraising regularly and systematically the effectiveness of all financial controls within the company; evaluating general and specific business conditions, formulation and implementation of accounting policies and methods for the company, etc.

Exceptional communication skills with proficient knowledge of Excel, problem solving and analytical skills are mandatory for this position. An ability to think ahead and plan should be there too for this position.

Compensation Package

The average Gross Salary of Finance Managers is Rs. 34,000. The maximum salary at this level is Rs. 57,500 and minimum is Rs. 15,000 that shows a large range at this level in the domestic/hybrids business. A standard deviation (variation in salaries) of Rs. 17,730 exists at this level. The Skewness of 0.35 indicates that the distribution is positively skewed as compare to zero for normal skewness. The Kurtosis 1.52 show that the distribution is less flat relative to the normal as standard is 3. The graph and table below also shows these entire statistics as explained above.



Sample: 1 6				
Included observations: 6				
Number of categories: 4				
			Cumulative	Cumulative
Value	Count	Percent	Count	Percent
[10000, 20000)	1	20.00	1	20.00
[20000, 30000)	2	40.00	3	60.00
[40000, 50000)	1	20.00	4	80.00
[50000, 60000)	1	20.00	5	100.00
Total	5	100.00	5	100.00

5.11 SUMMARY WITH AVERAGES OF PERSONNEL IN CALL CENTERS

The following tables represents the summary of averages obtained from over all analysis explained above.

5.11.1 Core Activity Personnel

	<i>Call Center Agents</i>	<i>Supervisors</i>	<i>Team Leads</i>	<i>Call Center Managers</i>	<i>CEO / Directors</i>
<i>Mean</i>	16553.33	22564.00	24455.00	59000.00	85833.33
<i>Median</i>	15500.00	21500.00	24500.00	57500.00	70000.00
<i>Maximum</i>	25000.00	30000.00	30000.00	87500.00	125000.0
<i>Minimum</i>	13000.00	16820.00	18820.00	30000.00	62500.00
<i>Std. Dev.</i>	4374.136	4762.928	6403.236	24786.59	34125.99
<i>Skew-ness</i>	1.384038	0.567365	-0.000395	0.021268	0.668878
<i>Kurtosis</i>	3.489975	2.519165	1.000527	1.400689	1.500000

5.11.2 Support Personnel

	<i>Marketing/Sales Managers</i>	<i>Administration Managers</i>	<i>Human Resource Managers</i>	<i>Business Managers</i>	<i>Finance/Accounts Managers</i>
<i>Mean</i>	32875.00	23573.57	34000.00	29000.00	31033.33
<i>Median</i>	30000.00	16000.00	33750.00	27500.00	25000.00
<i>Maximum</i>	57500.00	57500.00	57500.00	40000.00	57500.00
<i>Minimum</i>	14000.00	13500.00	16500.00	22500.00	15000.00
<i>Std. Dev.</i>	18066.43	15686.90	14352.70	6754.628	17444.39
<i>Skewness</i>	0.532646	1.700034	0.467665	0.897896	0.626498
<i>Kurtosis</i>	2.064110	4.329834	2.361549	2.505254	1.765863

5.12 REGION-WISE COMPARISON OF CALL CENTERS:

The following table represents the averages obtained from the call centers at different hierarchy levels in different regions that are Islamabad, Lahore, and Karachi. All given hierarchy levels have already been defined above in averages from all over the Pakistan.

Call Centre Core Activity Personnel

	Call centre Agents	Supervisors	Team Leads	Call Centre Managers	CEO/Directors
Mean (ISB)	14160.00	19910.00	18820.00	30000.00	97500.00
Mean (LHR)	25000.00	30000.00	30000.00	57500.00	NA
Mean (KHI)	15333.33	21500.00	24500.00	69166.67	62500.00

Call Centre Support Activity Personnel

	Marketing/Sales Managers	Administration Managers	Human Resource Managers	Business Managers	Finance/Accts. Managers
<i>Mean (ISB)</i>	NA	23750.00	33750.00	26250.00	36250.00
<i>Mean (LHR)</i>	57500.00	57500.00	57500.00	NA	57500.00
<i>Mean(KHI)</i>	30000.00	14833.33	26333.33	26250.00	20000.00

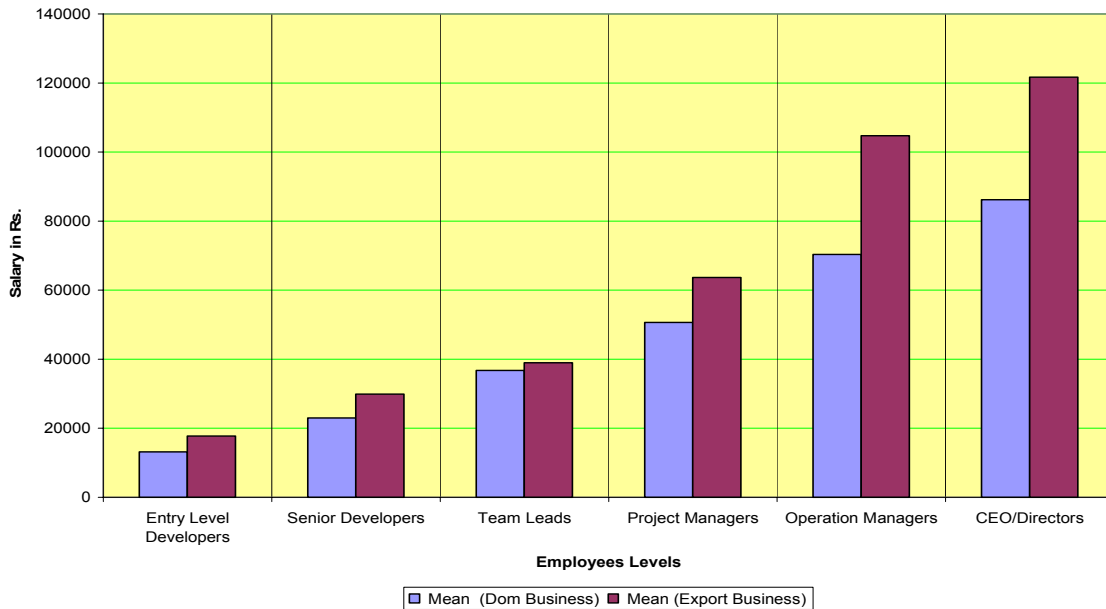
5.13 Cross-Sectional Analysis (Domestic and Export Business)

IT PERSONNEL

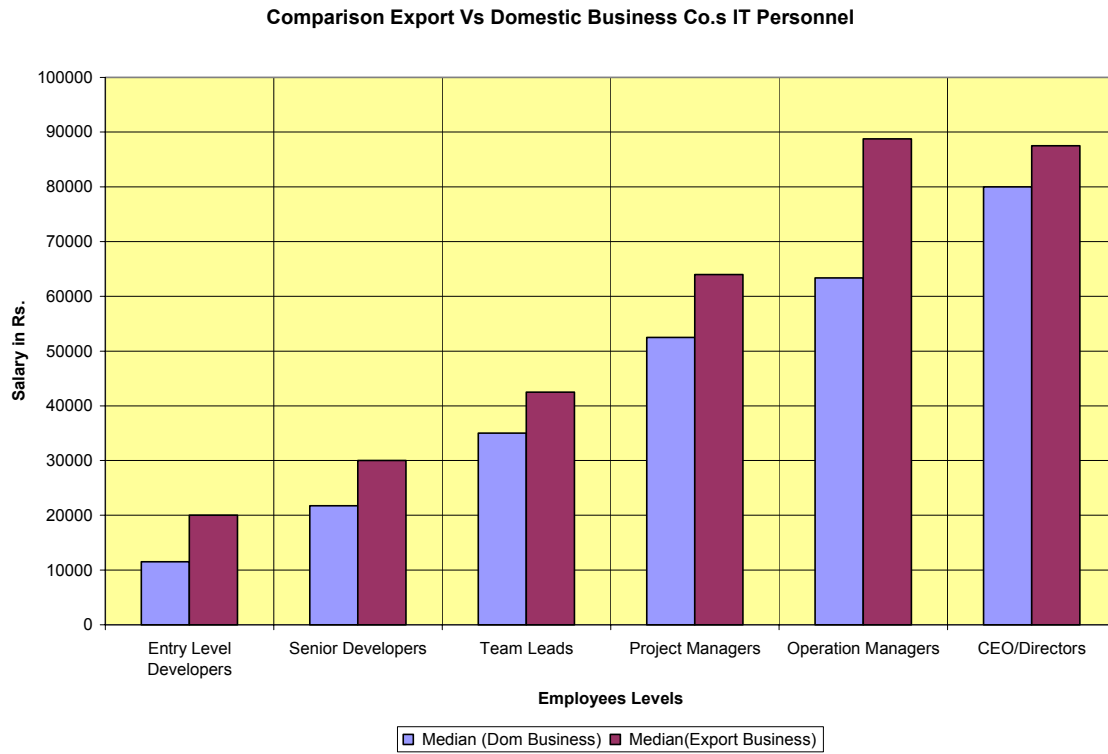
	Entry Level Developers	Senior Developers	Team Leads	Project Managers	Operation Managers	CEO / Directors
<i>Mean (Dom Business)</i>	13143.04	22946.43	36764.58	50635.93	70352.20	86166.71
<i>Mean (Export Business)</i>	17750.00	29900.00	38950.00	63700.00	104750.0	121666.7
<i>Median (Dom Business)</i>	11500.00	21750.00	35000.00	52500.00	63375.00	80000.00
<i>Median (Export Business)</i>	20000.00	30000.00	42500.00	64000.00	88750.00	87500.00
<i>Maximum (Dom Business)</i>	25000.00	45000.00	72500.00	95000.00	125000.0	165000.0
<i>Maximum (Export Business)</i>	21250.00	42500.00	46500.00	81000.00	165000.0	210000.0
<i>Minimum (Dom Business)</i>	5500.000	9000.000	13000.00	10000.00	27500.00	35000.00
<i>Minimum (Export Business)</i>	9000.000	18500.00	25500.00	45000.00	75000.00	67500.00
<i>Std. Dev. (Dom Business)</i>	5472.943	9891.391	15831.83	23102.67	21317.83	34453.18
<i>Std. Dev. (Export Business)</i>	4987.484	8597.965	8671.793	12804.30	36016.49	77149.75
<i>Skewness (Dom Business)</i>	0.502283	0.520859	0.708953	0.250758	0.820721	0.631319
<i>Skewness (Export Business)</i>	-1.360426	0.222664	-0.766039	-0.179883	1.081211	0.654023
<i>Kurtosis (Dom Business)</i>	2.117382	2.338878	3.122455	2.109237	4.089875	3.136215
<i>Kurtosis (Export Business)</i>	3.062273	2.409064	2.081162	2.463388	2.633263	1.500000

The following graphs represent the comparison of Mean Salaries in IT personnel of companies with domestic/hybrid business and export business.

Comparison Export Vs Domestic Business Co.s IT Personnel



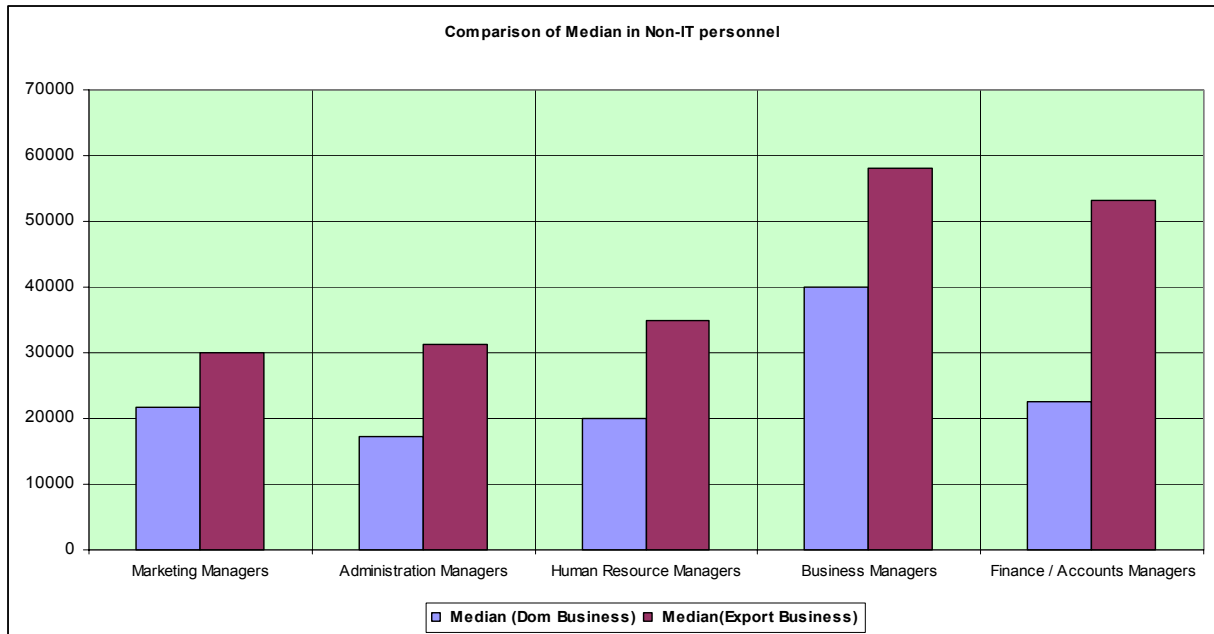
The following graphs represent the comparison of Median Salaries in IT personnel of companies with domestic/hybrid business and export business.



NON-IT PERSONNEL

	Marketing Managers	Administration Managers	Human Resource Managers	Business Managers	Finance / Accounts Managers
Mean (Dom Business)	24546.50	22331.62	24023.42	37859.91	28573.62
Mean (Export Business)	31100.00	34625.00	44166.67	57750.00	49125.00
Median (Dom Business)	21750.00	17275.00	20000.00	40000.00	22472.50
Median (Export Business)	30000.00	31250.00	35000.00	58000.00	53250.00
Maximum (Dom Business)	73459.00	66394.00	65000.00	73459.00	66394.00
Maximum (Export Business)	48000.00	65000.00	67500.00	85000.00	75000.00
Minimum (Dom Business)	5750.000	4000.000	6000.000	6000.000	5000.000
Minimum (Export Business)	10000.00	11000.00	30000.00	30000.00	15000.00
Std. Dev. (Dom Business)	15384.23	16762.14	14287.65	18565.09	18077.29
Std. Dev. (Export Business)	16764.55	22410.47	20361.32	24500.00	27532.93
Skewness (Dom Business)	1.161962	1.625193	1.401833	0.202635	0.717112
Skewness (Export Business)	-0.090475	0.503751	0.659440	-0.024036	-0.318097
Kurtosis (Dom Business)	4.839339	4.610407	4.769367	2.748486	2.459590
Kurtosis (Export Business)	1.453154	2.049709	1.500000	1.462948	1.491790

The following graphs represent the comparison of Median Salaries in Non-IT personnel of companies with domestic/hybrid business and export business.



The following graphs represent the comparison of Mean Salaries in Non-IT personnel of companies with domestic/hybrid business and export business.



6. ELEMENTS FOUND CONTRIBUTING IN VARIATIONS

6.1 PROJECT BASED COMPANIES VS PRODUCT BASED COMPANIES

Project-based companies mainly work on client projects. All characteristics in project-to-project organizations are manifested in their working environment. These attributes include instability and risk for employees and the companies too. Understandably so, these attributes are based on short life span of project work. These companies do not have any products of their own. The levels of compensation these companies offer have significant difference with product-based companies. The project-based companies pay higher salaries than the prevailing structure in the market when they have hefty projects especially from multinational firms. They can pay greater than normal compensation during the project and as the project ends it becomes difficult for them to sustain the level of compensation because similar revenue is not expected later until there is another project. Obviously, there are instabilities in project-based companies for employees, in heyday they get paid at much higher rates and when the tide turns they are washed out, too.

Product based companies are stable and established. They need employees at every point of time and retain their employees. For compensation levels, these companies do not pay dramatically high rates. Product-based retain employees on long term basis. Employees also are willing to money for job security. At employment time, the trend is to pay according to experience and future compensation is based on performance parameters. Average compensation for entry level in these companies can be from 15K to 18K.

6.2 REASONS FOR MAJOR DIFFERENCES IN GROSS SALARY

The salary data for the benchmarked positions shows considerable difference across the comparator organizations, both in the average and the maximum salary limits.

There appear to be five major factors contributing to this difference.

1. The minimum experience requirement is higher for organizations offering a higher salary range.
2. The responsibilities vary across the comparator organizations. For instance, a benchmarked position could be coordinating a countrywide operation at one end of the spectrum and may hold a desk job at the other.
3. Export oriented companies or companies with projects from foreign multinational have a higher pay range as compared to local companies or companies with primary focus on domestic business.

4. There exist none or little or less variation at Entry level, or we can say up till 3 years of experience, the compensation does not so much varies but the range expands, as the hierarchy increase towards senior levels.

5. The Non-IT hierarchy levels do not reflect the years of experience in those categories. So there comes a difference when the same work is handled by young or experienced professionals managing multiple jobs in a single organization like administration, human resource, business and finance.

7. SALARY STRUCTURE/BREAKUP IN DESCRIPTION

The above analysis is based on the gross salary figures obtained under each category, some other information consultants gathered on forms is mentioned in the following sections:

7.1 BENEFITS AND ALLOWANCES:

During our survey exercise we have observed that most companies contract personnel at the lower hierarchies (i.e. Entry level, Senior level and Team leads) on a gross salary basis. In case of middle and senior management (i.e. Project managers, Operation managers, Directors and CEOs), basic salary and benefits/allowances are specifically mentioned in response to the survey questionnaires, the reported results are reproduced below:

Reporting on Allowances, etc.	Companies with Domestic/Hybrid Business	Companies with Export Business	Call Centers
Companies provided Gross Salaries	27	2	4
Companies provided Break-up of Salaries	4	3	2

In percentage terms, the extent of allowances/benefits as a component of gross salary has been reported as below:

	Companies with Domestic Business	Companies with Export Business	Call Centers
No. of companies	4	3	2
Basic in terms of %age	58%	65%	67%,
Allowances in terms of %age	46%	35%	33%,

Non-Monetary Benefits

The non-monetary benefits are not uniform across the Industry and this differentiates for large, medium and small sized organizations. We for the purpose of this assignment, have considered provision of motor vehicles, pick & drop facilities, cellular phones under this category of benefits almost all companies offer cars to their CEO's. In some cases, senior managers are either provided the employer-owned cars or leased facilities.

Increment Policies

The 25 - 30% annual increment in the salaries is observed among most organizations. We can safely use it as ballpark figures across the industry for the forthcoming years. We can also use this proposition to forecast increment after 2 years.

However, certain externalities are there, like the industry is in establishment phase, so the established companies are paying well in compensations and benefits as those companies can sustain employee burden even when they are out of projects. Several other factors such as the expansion in the work scope emanating from across the globe, the availability or otherwise of the required skill sets in the available personnel in the job market, firms' profitability, etc would also influence the salary structures.

7.2 POST SERVICE BENEFITS AND MEDICAL:

Gratuity:

Established organizations do have such schemes for their employees, almost 10% (4 companies) of the covered sample size offer gratuity schemes after completion of 3 years of service. Smaller companies do not generally cater for gratuity schemes. Where such schemes exist, companies generally contribute one to two gross / basic salaries per year to the gratuity fund. There are variations as concerning the matching contributions by the employees. Thus, no consistent policy in this matter exists across the IT Industry.

Provident Fund:

Similar to the Gratuity Schemes, policies on provident fund scheme vary across the industry. It is observed that only 17% (7 companies) of covered sample size offer Provident Fund Schemes. The policy on contribution also varies. In some cases employer/employees have matching contributions. In others, only the employees contribute. The percentage of contributions varies from 5 – 10%. In cases where Funds have been established, generally the allowances are merged with the basic salaries in order to provide higher matching contributions from the employers.

Medical:

Some organizations provide medical benefits in the form of cash allowances as well as health insurance with an upper limit. These organizations also reimburse outpatient medical treatment costs. In a few cases, companies informed during the interviews that they meet hospitalization cost of their employees up to an upper limit of Rs. 180,000. This amount covers special incident as well as terminal illness for the year. In case the amount exceeds the given ceiling, specific approval of the management is necessary for the reimbursement.

	Medical Benefits	Gratuity	Provident Fund
Companies with Domestic Business	15	2	5
Companies with Export Business	4	2	2
Call Centers	2	0	0

7.3 LEAVE STRUCTURE

The leave structure is quite standard with few variations in the leave management policies. The employee leave policies almost exist in every company, the variations occur in the categories under leaves head and overall leaves.

Annual Leave

The annual leaves are found to be 18 on average and with 30 on maximum and in some organization there are no leaves under this category.

Most organizations have a policy of leave encashment. Employees can encash the annual leaves that they do not avail up till year-end.

Casual Leaves

The casual leaves are found to be 9 at average, and maximum of 20 and in some organization there exists no leaves under this category.

Medical Leave

The medical leaves are found to be 11 at average, and maximum of 60 is found and in some organization there exists no leaves under this category.

Personal Leave

The Hajj, maternity, paternity and compassionate leave structure is also there in some organizations to facilitate people, but these leaves can not be given in number of days.

	Casual	Medical	Annual	Overall
Mean	9.033333	10.96774	17.82353	34.51351
Median	9.000000	9.000000	15.00000	32.00000
Maximum	20.00000	60.00000	30.00000	84.00000
Minimum	0.000000	0.000000	0.000000	15.00000
Observations	30	31	34	37

7.4 PERSONAL DEVELOPMENT / TRAININGS

Training is very important. It plays a vital role in aligning the human resource with the dynamic nature of this industry and educating the human resource with innovative and wide spread techniques of this modern era where there is frequent change in tools, packages, and languages. All comparator organizations ensure their employees are upgraded through seminars, workshops and training programs the duration of these training programs depends on the orientation employees need.

In this industry normally the training is at entry level when a fresh graduate joins the organization. Secondly, the trainings are need based with respect to the project acquired / obtained. Thirdly, some of the companies, which have their own product line, train their employees according to the products and up coming new tools and skill sets.

The methods used by comparator organizations for developing their personnel are on job trainings, job enrichment and in some cases job rotation, coaching and mentoring.

7.5 MISCELLANEOUS BENEFITS

In addition to the benefits mentioned above, the organizations provide the following miscellaneous benefits: Bonus, Eid allowance, study allowance, child care, driver, laptop, mobile phone, paid/free lunches.

ANNEXURE 1

PROFILE OF COMPANIES

(This section has been withheld deliberately)

ANNEXURE 2

TOOLS FOR ANALYSIS

Tools for Analysis

To analyze the data obtained in bands of gross salary and variation thereof KMR used different central tendency measurement tools. For measuring central tendency, two elements were considered: firstly, the averages should represent the pragmatic figures encircling the maximum and minimum values within the range of data, and secondly, it should remain unchanged by a rearrangement of the observations in a different order. For this purpose we used these statistical tools for analysis.

1. Mean / average

The arithmetic mean or simply the mean is the most familiar average. It is defined as a value obtained by dividing the sum of the all the observations by their number. It is denoted by \bar{x} and calculated by the following formula.

$$\bar{x} = M = \frac{\sum_{i=1}^n x}{N}$$
 Where $i= 1, 2, 3, \dots, n$. & Σ , the Greek capital *sigma*, is a convenient symbol for summation and N is total number of observations.

Example: If our x values are 10, 15, 20, 25, 30, 35, 40 what is our mean?

We can calculate it using the above formula.

$$\Sigma X_i = 10+15+20+25+30+35+40=$$

$$X = 175/7 = 25 \text{ here } 25 \text{ is a value which represent all the data}$$

2. The Median

The median is defined as a value which divides a set of data in to two halves, one half comprising of observations greater than and the other half smaller than it. Or more precisely, the median is a value at or below 50% of the data lie.

Thus the sample median of the n observations $X_1, X_2, X_3, \dots, X_n$ when arranged in order from smallest to largest or vice versa.

When $n/2$ is not an integer the median is $\{(n+1)/2\}$ th observation and when $n/2$ is an integer, the median is the average of $n/2$ and $\{(n+1)/2\}$ th observations.

The median is a robust measure of the center of the distribution that is less sensitive to outliers than the mean.

3. Max and Min

The maximum value is the largest value appears in data and minimum value is the smallest value in the data.

For example in above serious 45 is the maximum and 10 is min value.

4. Variance/Standard Deviation

The variance of a set of observations is defined as the mean of the squares of deviations of all the observations from their mean.

It is the key measure that we want to use. The critical thing when we look at the dispersion of scores is how much they differ, how much spread there is around the mean.

- **Deviation of scores from the mean** $\sum(x - \bar{x})$
- **Sum of squares** $= \sum(x - \bar{x})^2$
- **Variance** $= s^2 = \frac{\sum(x - \bar{x})^2}{N}$

Where $x - \bar{x}$ is the subtraction of the mean from each score. If you use a mean as a focal point and subtract that from every score the sum will always be zero.

The variance is also denoted by Var (X). The term variance was introduced in 1918 by R.A. Fisher (1890-1962).

To know the deviations we will use the sum of squares. Using the sum of squares if I want to compare distributions is problematic since sample size is not the same. I want a measure of variance that allows me to compare class to class, group to group where the sample sizes might be different.

The statistic that is more valuable for interpretation is standard deviation, which is the square root of the variance $\sqrt{s^2}$. The standard deviation is expressed in the same unit as the observations themselves. Karel Pearson (1857-1936) “founder of the science of statistics” It is a measure of dispersion or spread in the series. It is given by:

$$S.D = \sqrt{s^2} = \sqrt{\frac{\sum(x - \bar{x})^2}{N}}$$

Where N is the number of observations in the current sample.

5. Skew-ness:

A distribution in which the values equidistant from the mean have equal frequencies, is defined to be symmetrical and any departure from symmetry is called skew-ness. It is a measure of asymmetry of the distribution of the series around its mean. The skew-ness of a symmetric distribution, such as the normal distribution, is zero. Positive skew-ness means that the distribution has a long right tail and negative skew-ness implies that the distribution has a long left tail. For a positively skewed distribution, mean > median > mode and in a negatively skewed distribution, mode > median > mean. A mathematical expression of Skewness is as

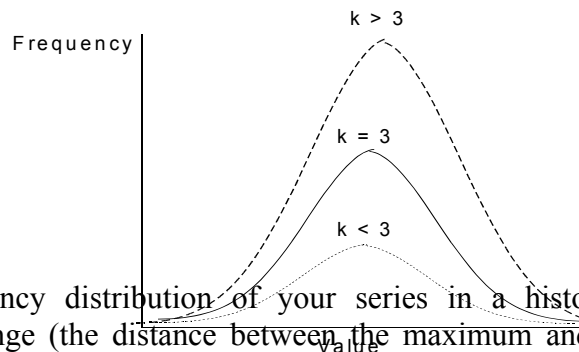
$$S = \frac{1}{N-1} \sum_{i=1} \left(\frac{X_i - \bar{X}}{\sigma} \right)^3$$

6. Kurtosis:

Karl Person (1857-1936) introduced the term Kurtosis for the degree of peakedness or flatness of a unimodal frequency curve.

It measures the peakness or flatness of the distribution of the series. Kurtosis is computed as where is based on the biased estimator for the variance (Bickel and Doksum 1977, p.388). The kurtosis of the normal distribution is 3. If the kurtosis exceeds 3, the distribution is peaked (leptokurtic) relative to the normal; if the kurtosis is less than 3, the distribution is flat (platykurtic) relative to the normal.

$$K = \frac{1}{N-1} \sum_{i=1} \left(\frac{X_i - \bar{X}}{\sigma} \right)^4$$



7. Histograms

This view displays the frequency distribution of your series in a histogram. The histogram divides the series range (the distance between the maximum and minimum values) into a number of equal length intervals or bins and displays a count of the number of observations that fall into each bin. A complement of standard descriptive statistics is displayed along with the histogram. All of the statistics are calculated using observations in the current sample. Mathematically, the curve is represented by the relation $y=f(x)$ and

has a great importance property concerning its area. The following graph represents histogram.

Application Software Used for Analysis:

Two type of application software's are used to analyze the data

- 1) Microsoft Excel (XP) for data classification into tabular form.
- 2) Econometric Views (E Views 3.1) for advance analysis of the data.

Mean, Median, Standard Deviation, Maximum, Minimum, Skewness, Kurtosis and Histograms are obtained with the help of this software.

ANNEXURE 3

LIST OF SURVEY COMPANIES (SURVEY SAMPLE) PROPOSED & ACTUAL

(This section has been withheld deliberately)

ANNEXURE 4

LIST OF PERSONS MET

(This section has been withheld deliberately)

ANNEXURE 5

QUESTIONNAIRES OLD & MODIFIED

(This section has been withheld deliberately)
