

Making retirement security a Reality for the Engineers in Bangladesh



Instructor

Mohammad Mastak Al Amin

Assistant Professor

Department of Mathematics and Natural Science

BRAC University

About the authors



MD. Sakib Khan

16/17101191

Computer Science & Engineering Department
BRAC University



Shakib Mahmud Dipto

13/17101153

Computer Science & Engineering Department
BRAC University



Afra Abreshmi

04/15136009

Mathematics & Natural Science Department
BRAC University



Dorin Teresa D'costa

03/15136006

Mathematics & Natural Science Department
BRAC University



Syeda Tanjina Hasan

17101184

Computer Science & Engineering Department
BRAC University



Bijoya Bakali

32/17121053

Electrical & Electronics Engineering Department
BRAC University



Nafisa Tabassum Abonti

27/17101465

Computer Science & Engineering Department
BRAC University



Farisha Tabassum

14/17101154

Computer Science & Engineering Department
BRAC University



Saiful Islam

17101207

Computer Science & Engineering Department
BRAC University



Fariha Reza

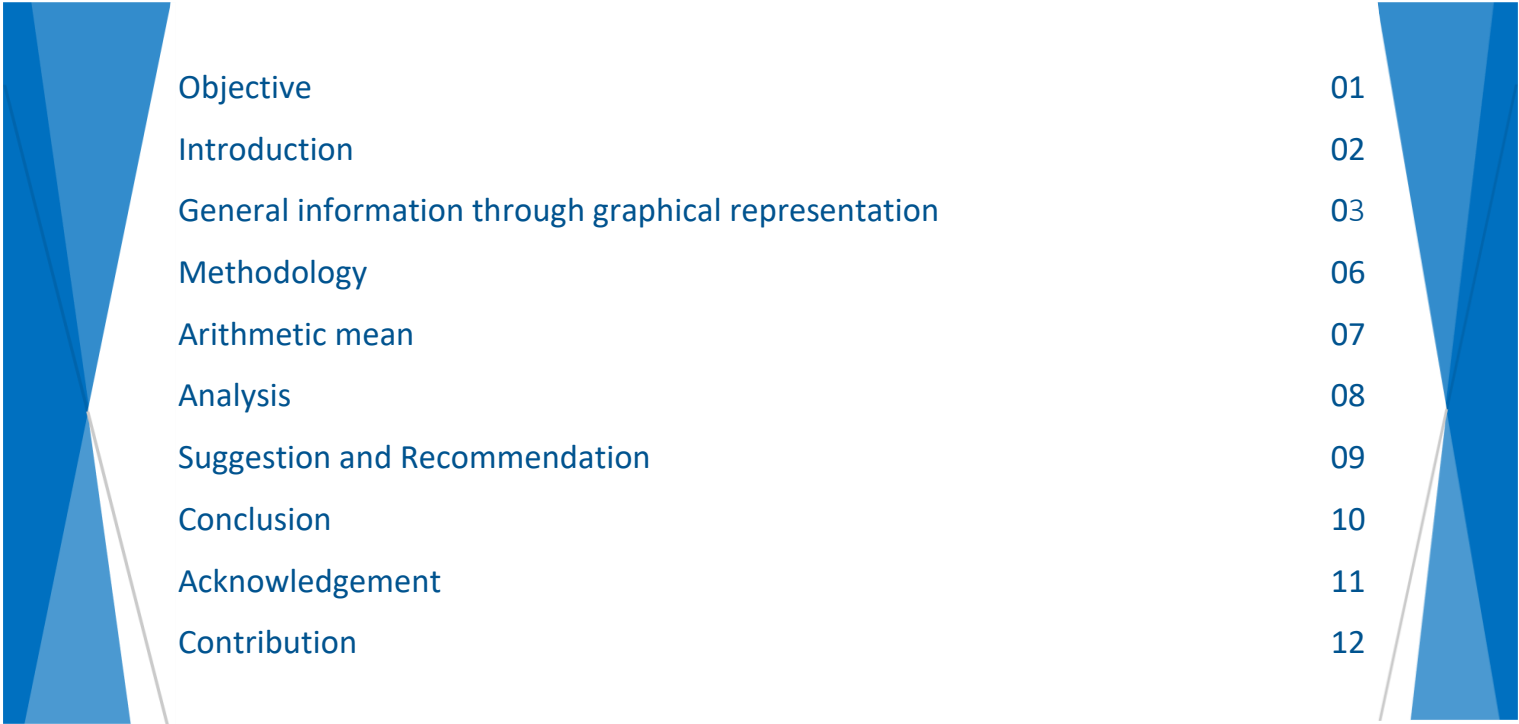
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Electrical & Electronics Engineering Department
BRAC University



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Objective

Our main objective is to survey some government and some non-government engineers to find out some solutions regarding their retirement security issue. For that, we have made several questions for them to ask such that, their salary, living costs, savings, pension plan and some suggestions to secure their retirement. From these information, our target is to compare their earnings and their living cost to find out their amount of savings. The reason why we choose to find out the savings is to predict their living standard after their retirement and those who cannot save enough money, our target is to find out a solution for them to ensure their retirement security. Most of the times non-government employees are facing this retirement policy problem and that's why our main target group was non-government employees rather than government employees.



Introduction

Over the generations, the concept of retirement has changed dramatically however, the planning of what to do after retirement has not changed. In Bangladesh, the retirement policy for engineers vary from company to company. Retirement is a necessity for engineers so, that it can make way for the young innovative engineers in the job market and turn the jobs less costly. There might be no more work pressure from the companies but, spending holidays at exotic locations or spending time doing their hobbies are the basics that mostly comes to the mind when thinking about what to do after retirement. To begin with, how often do these engineers make a solid plan about retirement even after knowing there are so many variables at play and no guarantees when retirement is looming. It is challenging to plan accordingly by estimating the effects of retirement on financial and non-financial factors. Taking a retirement can be very stressful so, the people must be mentally prepared. Before engineers are taking retirement, they must ask themselves these important questions whether they are earning enough money for savings to last a lifetime, whether there is enough to support health issues, living costs and enough to spend on happiness after retirement. To consider what strategies to follow an engineer must plan by consulting financial advisors and create a plan based on his current age and what age to retire. Moreover, one must not only depend upon their savings, they must plan for various investments to live a comfortable life. Furthermore, engineers must determine the risk amounts that they wish to take on when planning for investments and as the engineers get closer to their retirement age they must consider the safety factor necessary to protect their plan before investing. Engineers must also identify what other earnings can they make, be aware of the plans made by the government to support the senior citizens and knowing about company policy is important to make retirement a reality for engineers.

General information through graphical representation

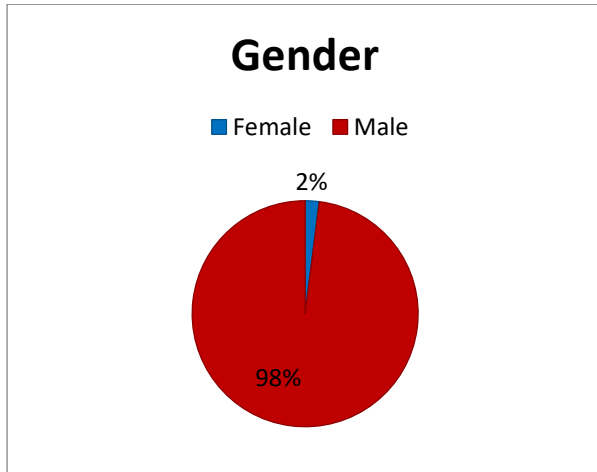


Chart 01

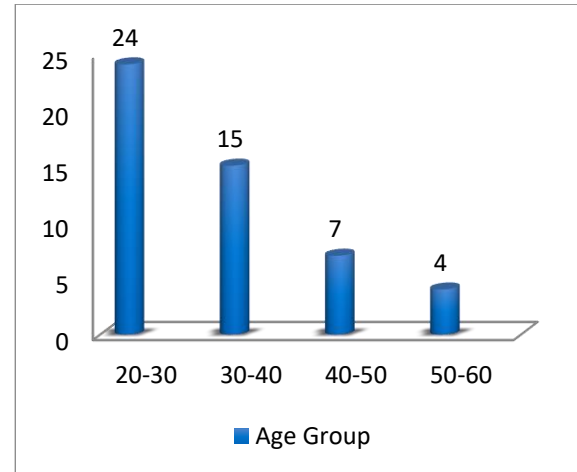


Chart 02

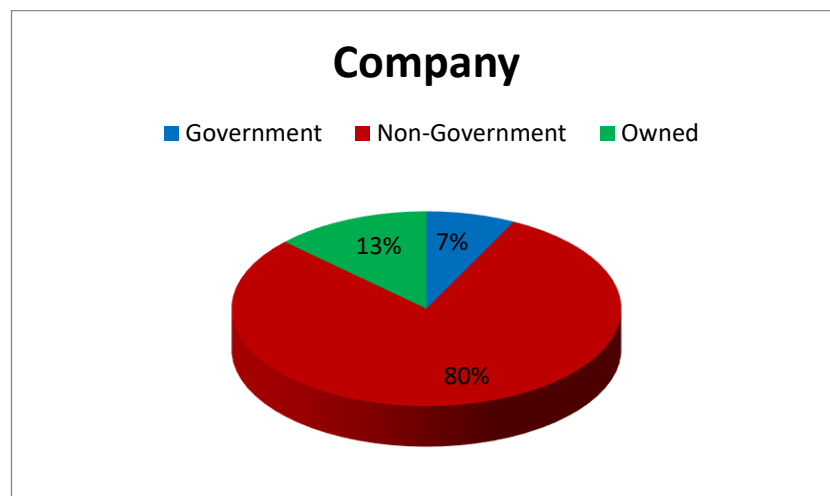


Chart 03

From the above three charts it can be seen that while carrying out the survey, 98% male and 2% female participated. So, the majority of the surveyor is male. Then again, the engineers amongst the age group of 20-30 participated mostly whereas, only 4 surveyors were amongst the age group of 50-60.

The surveyors were mostly (80%) from non-government company and from government company there were only 7% surveyors. However, there were also 13% of surveyors who own their own company.

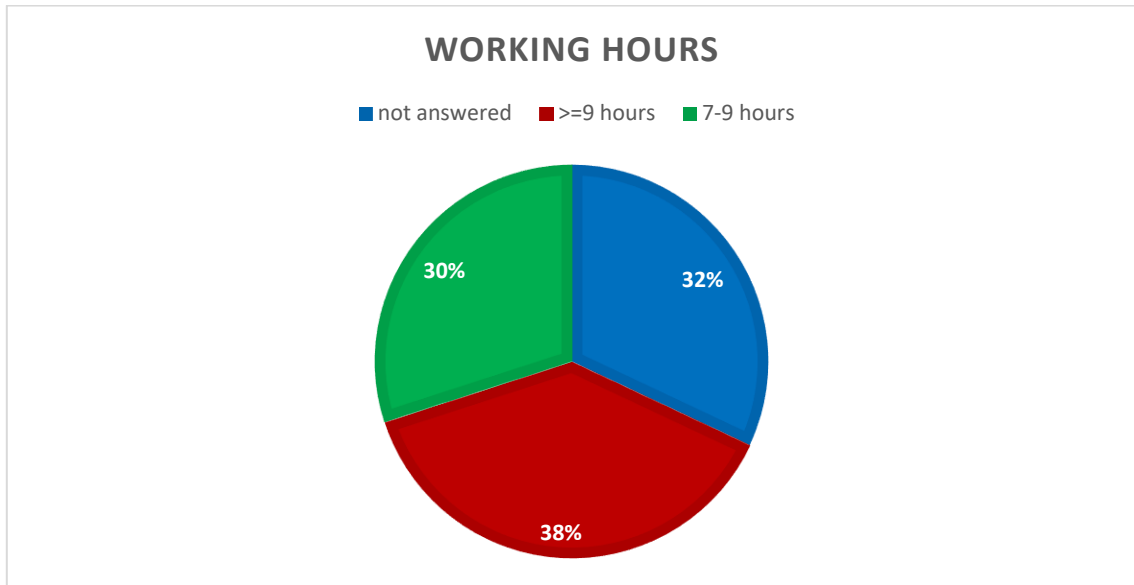


Chart 04

32% of the surveyors did not show any interest in answering about their working hours and only 38% of the surveyors work for 9 hours or more than that. The reason of not showing any interest is non-government companies do not have time limits most of the time. They need to stay for longer period of time or sometimes they finish their work before time.

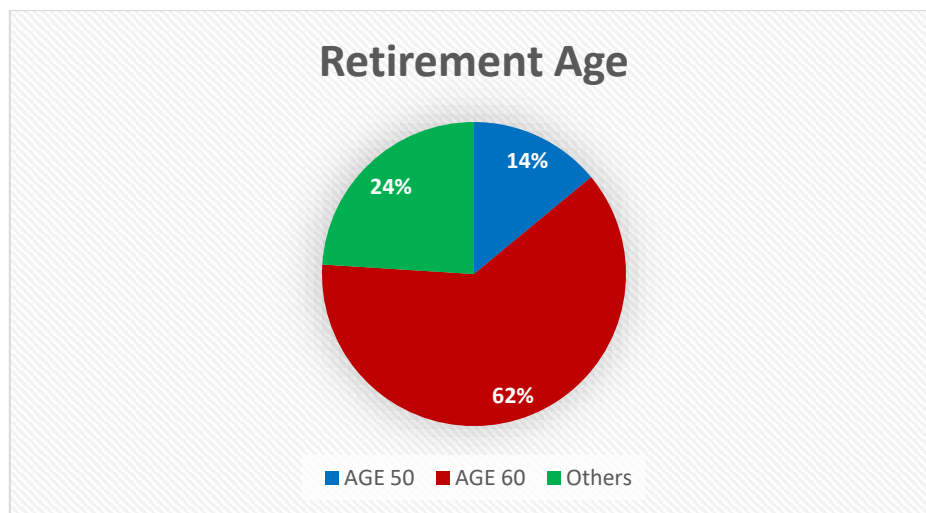


Chart 05

Majority of the surveyors which is 62%, showed interest in getting retired at the age of 60. Least of the surveyors (14%) thought of getting retired at the age of 50. So, it can be analyzed that most of the surveyors want to keep up with their job until they get old because till then they want to secure their financial source for future.

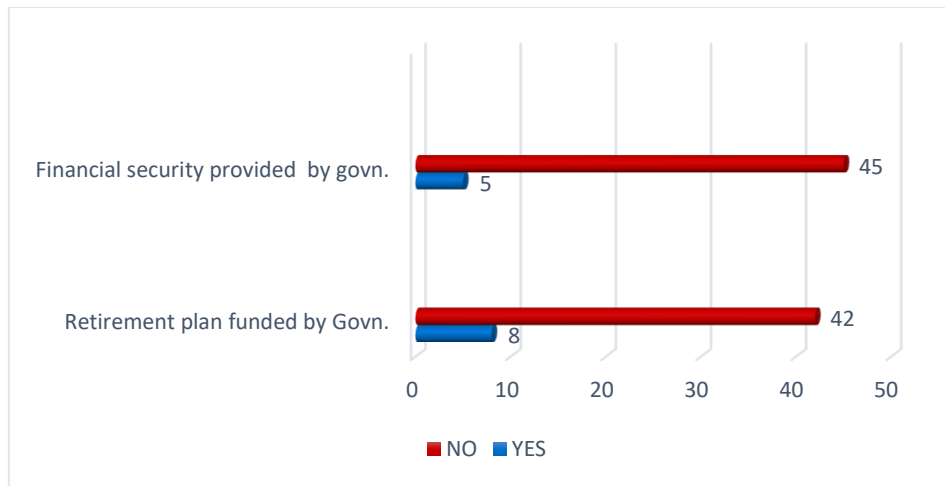


Chart 06

Majority of the surveyors said that there is no retirement plan funded by the Government along with no financial security is provided by the government as well. This indicates that the government should ponder about this matter as they are getting negative reviews.

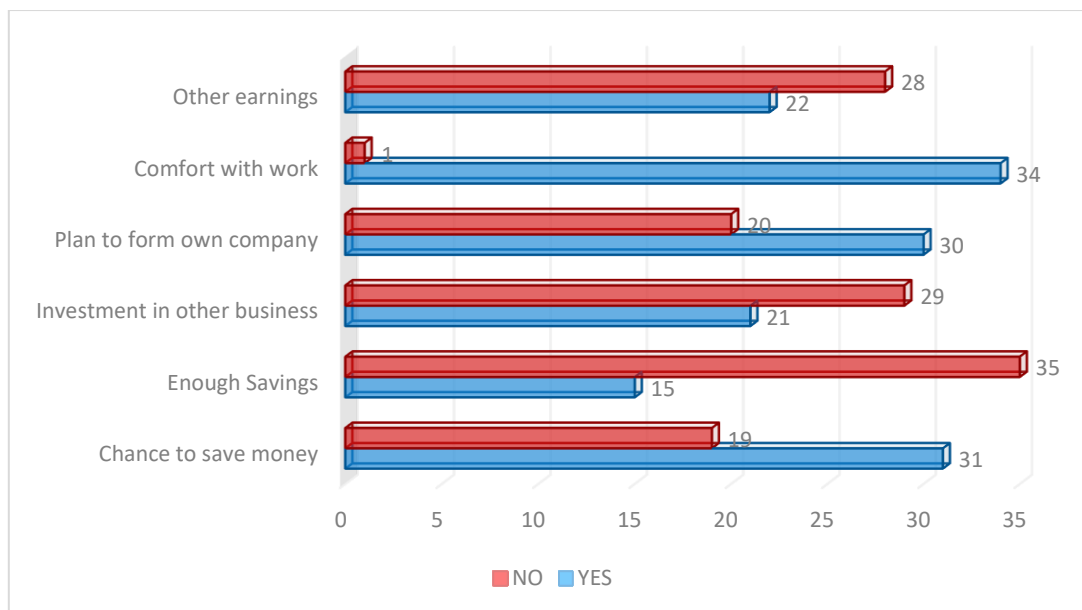


Chart 07

This chart shows multiple responses about different questions. It can be seen that majority of the surveyors, which is 28 persons out of 50 do not have other earning sources and they are even not planning to invest in other business. Which is why 29 people out of 50 answered negatively. However, 30 out of 50 persons plan to form their own company as they want a financially secured future. 34 out of 50 people are comfortable with their work and only 1 person is not satisfied with the work sector.

It can be seen that 35 out of 50 people think that they do not have enough savings but majority of the surveyors (31 out of 50) think that it is possible to save money if proper measures are taken.

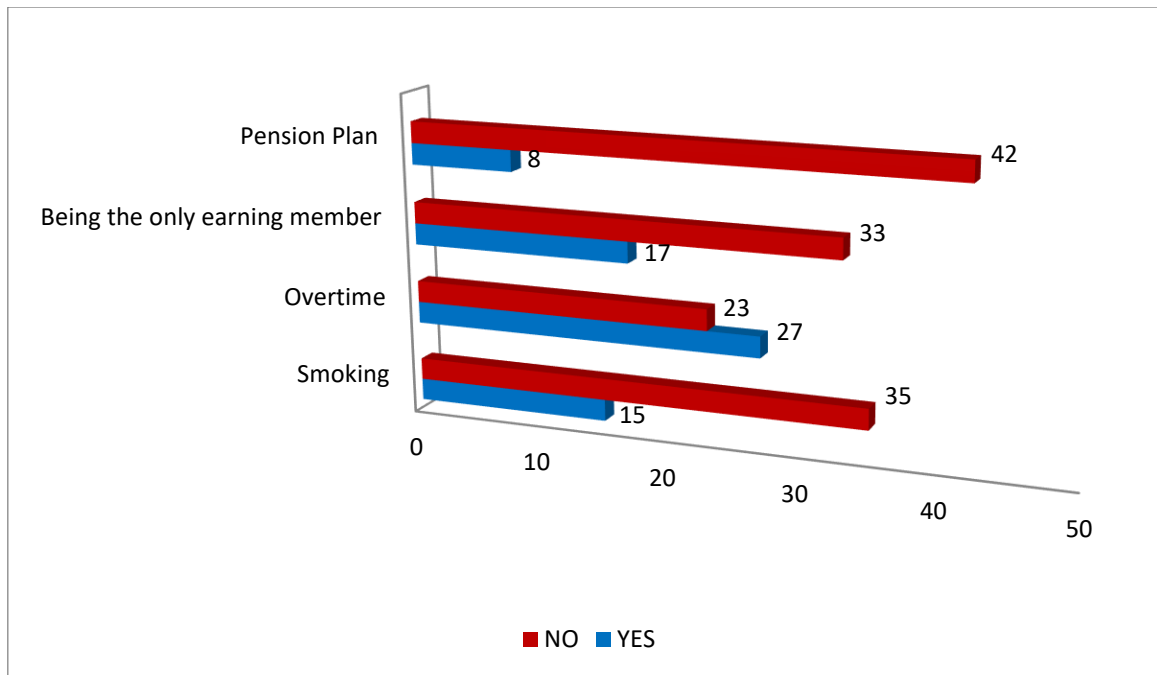


Chart 08

Chart 8 shows the responses of the surveyors on different questions. While they were asked that whether they have a pension plan or not, majority of them said they do not have any plan yet. Also they are not the only member to earn wages, according to the chart. Also, 35 out of 50 people said that they do not smoke, so they do not spend a lot on smoking. However, majority of the surveyors (27 out of 50) said that they do overtime. This indicates that as their earnings might not be sufficient for them, they go for overtime to fulfill their living costs.

Methodology

The survey has been carried out on making retirement security a reality for engineers in Bangladesh. To analysis that and have a good picture of that scenario we decided to make analysis of the collected data by using few methods. Also, to determine the quality of the data a few methods have been used as well. Here we represent the methods below that we have worked with:

- Arithmetic mean to determine the average value of salary range and living cost
- Variance and standard deviation to determine the quality of the data set

Arithmetic mean

Mean of salary earned:

Salary range	Fi	xi	fixi	xi- \bar{x}	(xi- \bar{x}) ²	Fi(xi- \bar{x}) ²
00000-20000	9	10000	90000	-37200	1x10 ⁹	9x10 ⁹
20000-40000	15	30000	450000	-17200	3x10 ⁸	5x10 ⁹
40000-60000	10	50000	500000	2800	8x10 ⁶	8x10 ⁷
60000-80000	6	70000	420000	22800	5x10 ⁸	3x10 ⁹
80000-100000	10	90000	900000	42800	2x10 ⁹	2x10 ¹⁰

Arithmetic mean $\bar{X}=47200$

Variance of salary: $S^2=4 \times 10^{10}/49=8 \times 10^8$

Standard deviation $=3 \times 10^4$

Mean of Living cost:

Living cost	Fi	xi	fixi	xi- \bar{x}	(xi- \bar{x}) ²	Fi(xi- \bar{x}) ²
00000-20000	20	10000	200000	-18400	3x10 ⁸	6x10 ⁹
20000-40000	14	30000	420000	1600	3x10 ⁶	4x10 ⁷
40000-60000	16	50000	800000	21600	5 x10 ⁸	8x10 ⁹

Arithmetic mean $\bar{x} = 28400$

Variance of living cost: $S^2 = 1 \times 10^{10}/49 = 3 \times 10^8$

Standard Deviation $= 2 \times 10^4$

If these two values are compared, we can get an idea of savings of the surveyors. As,

Savings = Salary – cost of living

$$= 47200\text{tk} - 28400\text{tk}$$

$$= 18800 \text{ tk}$$

So, the mean of savings of 50 surveyors is 18800 tk. It means each of them can save up to 18800 tk.



Analysis

After calculating the arithmetic mean of the savings of 50 surveyors, it can be seen that each of them can save around 18800 tk per month. If we see, we can understand that the amount of savings is moderate for the surveyors who have high income per month. However, the saving is not appropriate for those who have low income per month. There are 10 surveyors who have income between the range of 80,000 to 1,00,000. On the other hand, 9 surveyors have a salary of 20,000 or less than that. So, for those 10 surveyors the savings would be moderate as they have a high-income source, but for the other 9 surveyors the savings might not be appropriate.

Then again, for the 14 surveyors who have a living cost between the range of 20,000 to 40,000, the savings would not be sufficient if they have a low-income source. However, it might not be a matter of concern for those who have a high-income source as they can compensate the cost each month.

This data totally matches with chart 07, where 35 out of 50 surveyors said that they do not have enough savings. So, the majority of people agree with the matter that their saving is not sufficient for them. From the same chart it can also be seen that majority of the surveyor do not have other earning source. So, from only one income source cannot be a solution for them to save a high amount of money each month. However, 31 out of 50 people said that there is a chance to save money each month if some measures are taken.

The data set of the salary range and the living cost have a high variance and standard deviation. This indicates that these data sets have a high deviation. For which, this data set is not a homogenous data set.

Suggestion and Recommendation

While doing the survey, we have come across some problems that are faced by the engineers in job sectors. However, these problems have a few solutions according to the surveyors as well. The solutions are as follows:

- A community can be built up for the retired engineers who can advise the development of the infrastructure and future of the country.
- providing similar facilities to Non-government employees like government employees
- Free healthcare service by the government after the retirement
- Law enforcement for pension by the Government
- In every company there should be a policy for retirement.
- Provide pension plan, apply loan policy for the employers
- Government and employer should have a joint plan for retirement security
- Saving money in daily basis.
- Every engineer should save money as much as possible for a secured retirement
- Engineers can make a network between them to build a strong community for further steps after retirement
- Company should have a fund for the retired employees so that whenever its need the retired employees can get help from this fund
- Non-government companies should make a policy
- Engineers can also Do some other Part time jobs to earn more money
- Government should apply the same rules for all the private companies
- Good salary range can also be helpful to save money



Conclusion

After surveying about the engineers we have come to a conclusion that, most of the Non Government engineers are complaining about the pension plan and their savings are not enough. Then they have mentioned that they are interested to invest in other businesses just to have some savings for future. They are also willing to build own company for a stable future. The main reason of all the complaints that they have mentioned is dissatisfaction with their salary and while they were giving suggestions about solving this issue, they mentioned about having different pay scale which will satisfy all the employees who are engineers. The reason why they want a perfect pay scale is, one of the part of our analysis where we have mentioned that their savings is moderate but that can be accepted only for engineers with a high and handsome salary but those who don't get that, can't save enough money what they want. The last thing that we have got from them is, they want their employers to impose a pension plan, loan facility, funds whenever it's needed for the employees. Only then the retirement security for the engineers can be ensured.



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Contribution

Name	Activity
MD. Sakib Khan	Formulating questions, Data collection, Data entry, Created new data tables for submission ,selecting objective, writing conclusion, Arranging the different parts of the report, Printing the report.
Shakib Mahmud Dipto	Formulating questions, Data collection, Cover page, Authors page, Re-arrange & Modifying the Report in a presentable way, Printing the report.
Afra Abreshmi	Formulating questions, Data collection, Charts,Analysing data, Methodology, Suggestions,Recommendation
Dorin D.Costa	Analysing data , Methodology
Sayed Tanjina Hasan	Data collection, writing objective
Nafisa Tabassum Abonti	Data collection, writing acknowledgment
Bijoya Bakali	Data collection, writing Introduction
Farisha Tabassum	Data collection
Fariha Reza	Data collection
MD. Saiful Islam	Data collection