



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

**PROBABILITY & STATISTICAL DATA
ANALYSIS
(SECI2143-01)**

PROJECT 1

PREPARED FOR:

DR. SHARIN HAZLIN BINTI HUSPI

PREPARED BY:

NAME OF STUDENTS	MATRIC NO.
NURUL NAJWA BINTI HUSSEIN	A19EC0303
NURUL LIYANA BINTI MOHD. YUSOF	A19EC0144
AMINUL HAKIM BIN MD RAFIE	A19EC0017
MD SHAKIL CHOWDHURY	A18CS4047

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I. INTRODUCTION

Living in university life surely acquired students to spend their money a lot. For instance, university fees, college activities, books, food, and others are the common thing that students always need to expend for. On the other hand, every year we often heard that there are students are broken or having financial problem although some of them are receiving the scholarship. However, do you ever wonder why this issue always occurs through the years? Is the scholar is not enough? How they spend their money at university? Thus, we have surveyed to study student financial management. The purpose of this study is to determine personal financial management habits and skills among the students in the Faculty of Engineering. Then, the constructed data will help us to construct the alternatives to solve this financial issue.

II. METHODOLOGY

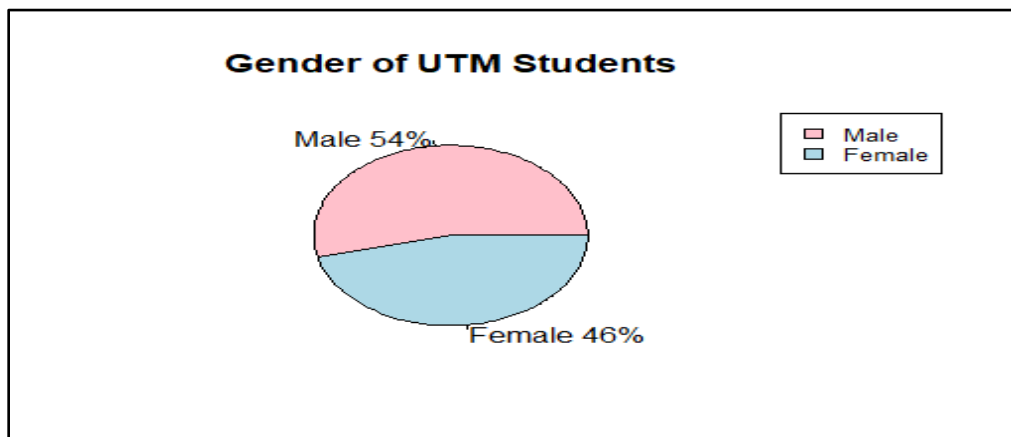
80 respondents are selected randomly from all school in Faculty of Engineering UTM to answer this survey. The method used to collect all data is by distributing the Google Form to every student via Whatsapp group. Below are the variables of data collected in this survey:

Data Collected	Data measurement	Data Collected
Gender	Nominal	Male, Female
School	Nominal	School of Computing, Mechanical Engineering, Chemical Engineering, Biomedical Engineering, Electrical Engineering, Civil Engineering
Year of Study	Nominal	1, 2, 3, 4
Student	Nominal	Local, International
Money Source	Nominal	LOAN, Scholarship, Parents, Allowance, Part time job
CGPA	Ratio	2.00 – 4.00

Range of Income, Expenses, Savings	Ratio	Amount filled by Students
Type of Item Bought (Money Spend)	Ordinal	Food & Beverages, Clothes, Book & Stationery, Transportation, Phone Bill, Entertainment, Activities Fee
How Financial Effect Their Studies	Ordinal	Stress
How Financial Effect Their Health	Ordinal	Health
Common Mistakes of Every Student	Nominal	Based on option given
Ways of Overcoming Financial Crisis	Nominal	Based on Option Given

RESULT AND DISCUSSION

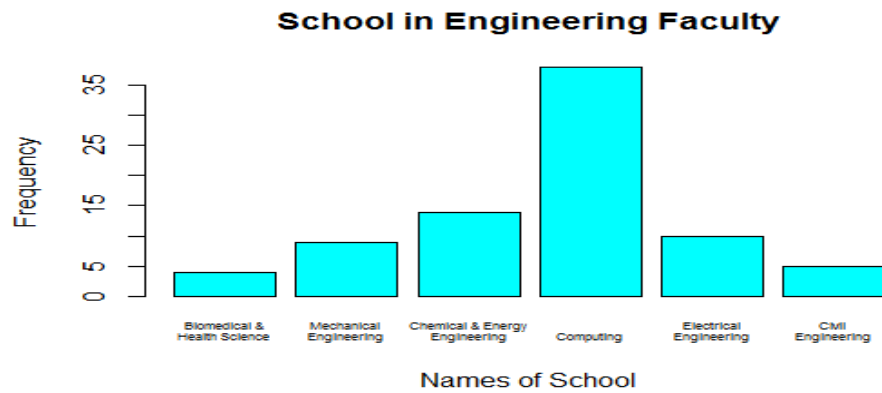
GENDER OF RESPONDENTS



(Pie chart 1: Gender of UTM Students)

Based on Pie Chart above, male respondents dominate the survey by 54% followed by female respondent by 46%. It showed that majority of the respondent are male with number of participant 43 and 37 for female participants. From this result, we can conclude that males are more concern about their financial management since they will become head of family in the future.

COURSE OF THE RESPONDENTS



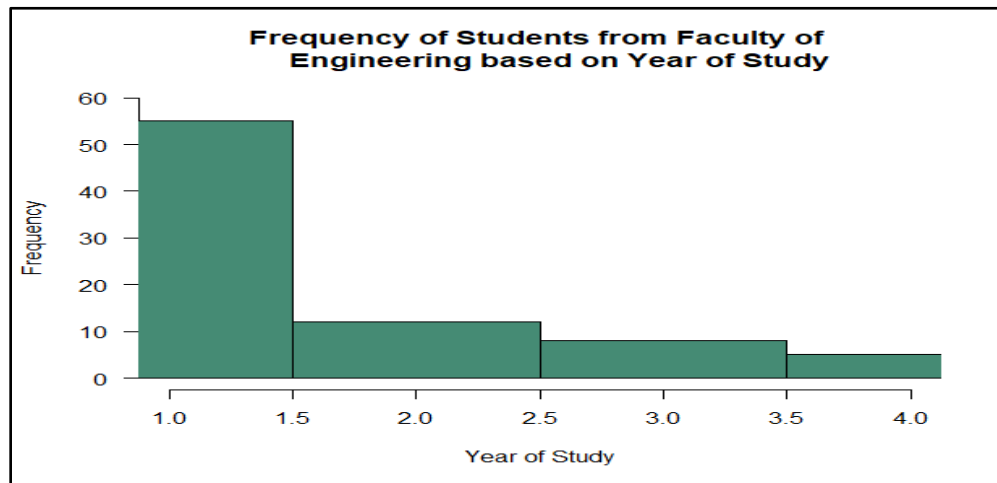
(Bar chart 1: Course of UTM Students)

There are 6 schools in Engineering Faculty that are included for this survey. Based on the bar chart above, the majority of the respondents are from the school of Computing which is 38. School of Chemical and Energy Engineering is in second place with 14 students having answered. Next, the school of Electrical Engineering and the school of Mechanical Engineering have 10 and 9 respondents respectively. The school of Civil Engineering is placed in the second last with 5 respondents only. The school of Biomedical Engineering and Health Science was recorded as the lowest number of respondents which is 4.

YEAR OF STUDY

Year	Frequency	Cumulative Frequency	Relative Frequency	Cumulative Relative Frequency	Percentage of Relative Frequency
1 st Year	55	55	0.69	0.69	69%
2 nd Year	12	67	0.15	0.84	15%
3 rd Year	8	75	0.10	0.94	10%
4 th Year	5	80	0.06	1.00	6%

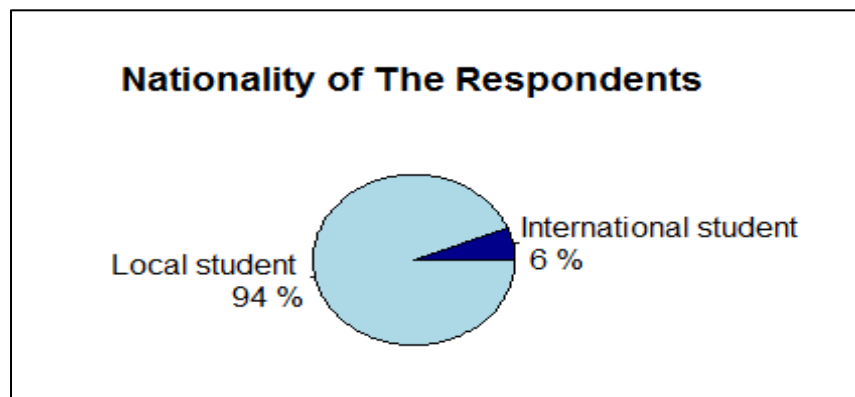
(Frequency Distribution Table 1)



(Histogram 1: Frequency of Students based on Year of Study)

According to the histogram 1 and table 1, 1st year students answered the survey the most with percentage of 69% (55 respondents) followed by 2nd year students with 15% (12 respondents). 3rd year students recorded 10% (8 respondents) and 4th year student recorded the lowest number of respondents with only 6% (5 respondents). This reflected that 1st year students may have a lot of free time to answer the survey and more responsive. 4th year student may spend their times to finish the project, assignment and some may undergo internship at the company. They also have more experience in managing their money since it's been more than 3 years living as a student.

NATIONALITY OF RESPONDENTS



(Pie chart 2: Nationality of UTM Students)

By referring to the pie chart, 94% of the respondents are the local students, which they are from Malaysia. Meanwhile, the rest of the respondents are from international students which are 6%.

MONEY SOURCE

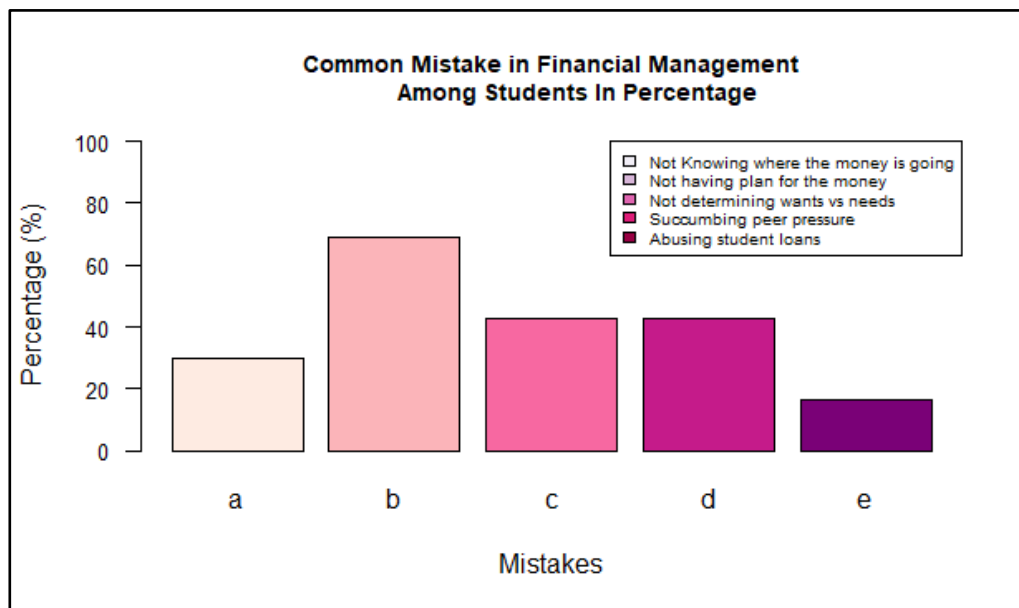
Money Source	Frequency	Cumulative Frequency
Allowance (PALAPES/ SUKSIS/ etc), Parents	1	1
Parents	27	28
Part Time Job, Parents	4	32
Scholarship (JPA/ MARA/ etc)	13	45
Scholarship (JPA/ MARA/etc) , Parents	2	47
Student Loan (PTPTN/ Yayasan/etc)	19	66
Student Loan (PTPTN/ Yayasan/etc) , Allowance(PALAPES/SUKSIS/ etc), Parents	1	67
Student Loan (PTPTN/ Yayasan/etc) , Parents	11	78
Student Loan (PTPTN/ Yayasan/etc) , Part Time Job	2	80

(Frequency Distribution Table 2)

From the frequency table above, 27 students have their parents only as the money source. Besides that, there are some students are having scholarships only and study loans only as of

the money sources which are 13 and 19 respectively. Thus, most of the students are getting money from their parents. Moreover, some of them are still receiving the money from the parents; even they are having their own income such as scholarships, loans, and allowances. Apart from that, 2 out of 5 students are using their own income only to bear the university cost.

COMMON MISTAKES IN FINANCIAL MANAGEMENT AMONG RESPONDENTS

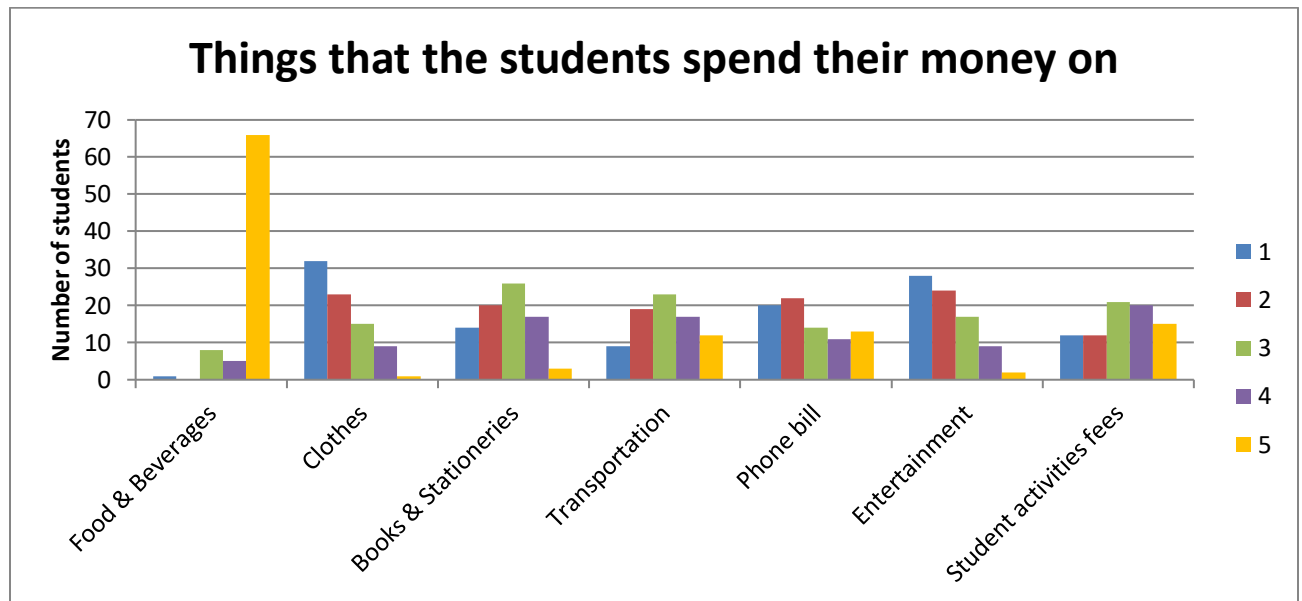


(Bar chart 2: Common Mistakes in Financial Management Among of the Students)

The Bar Chart shows the highest record with 68.8% saying that not having a plan about their money is the biggest mistake. Students often have no plans on how they will use their money such as saving for emergencies. It leads them to borrow money either from their friends or family member when the emergency occurs like repairing the car or motorcycle. Next, based on the chart, not determining wants and needs and succumbing from peer pressure hold the same record which is 42.5%. It shows that students always confuse with what they really want and what they really need. They also tend to follow their friends anytime. So, we can conclude that these two points are connected to each other. It is because most of students put aside their needs and ultimately going to shopping complex with their members to do whatever they want such as watching movies, playing games, buying clothes and others. The other 30% recorded saying that not knowing where the money goes is the common mistake

for them. After entering the university, students had control over their financial. All the spending is depending on students themselves. Without any plan, overspending is highly to be occurred. They spend everything without any record and leaving a small amount of money. They realized it afterward and forgot where the money goes. Furthermore, 16.3% of students choose abusing student loan as their common mistake. Rather than using the loan for necessary items, they use it to enjoy themselves during the weekend instead.

THINGS THAT THE RESPOENDENTS SPEND THEIR MONEY ON

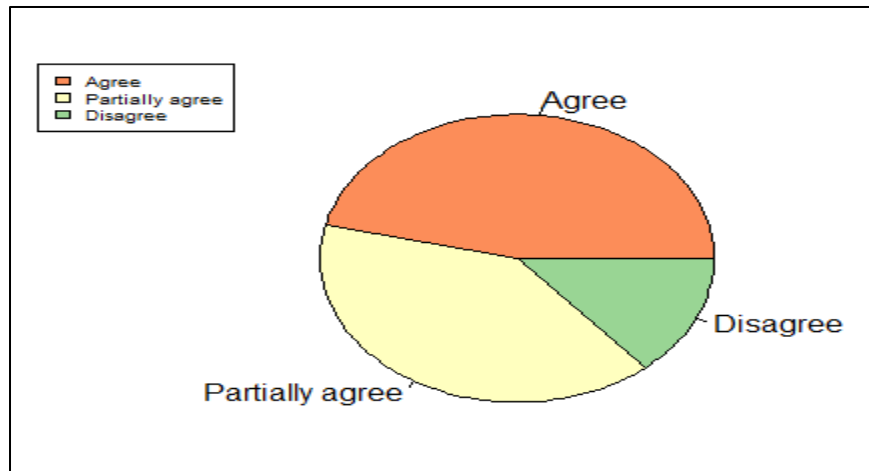


(Bar chart 3: How the students spends their money on)

Based on Bar Chart 3, 66 students (82.5%) strongly agree that they spend most of their money for food and beverages compare to the clothes, which are only 1 student that strongly agree to it. It is because food and beverages are the most important things compared to the others, which are not very necessary such as clothes. Next, there are 26 out of 80 students choose 3, which are neither agree or disagree for books and stationeries. For transportation, there are only 9 students (11.25%) that spend the least of their money for it. It is likely because most of the respondents are first year students, which they are not allowed to bring their own transport. Thus, they do not have to waste their money for transportation. Then, most of the students (27.5%) disagree that they spend their money for phone bill meanwhile 28 students (35%) strongly disagree that they spend most of their money for entertainment

such as watching movies or games. Lastly, 21 students either agree or disagree that they spend their money for student activities fees. According to the bar chart 3, it is clearly shown that scale 5 for food and beverages have the highest number of students compare to others. We can conclude that they spend most of their money for food and beverages.

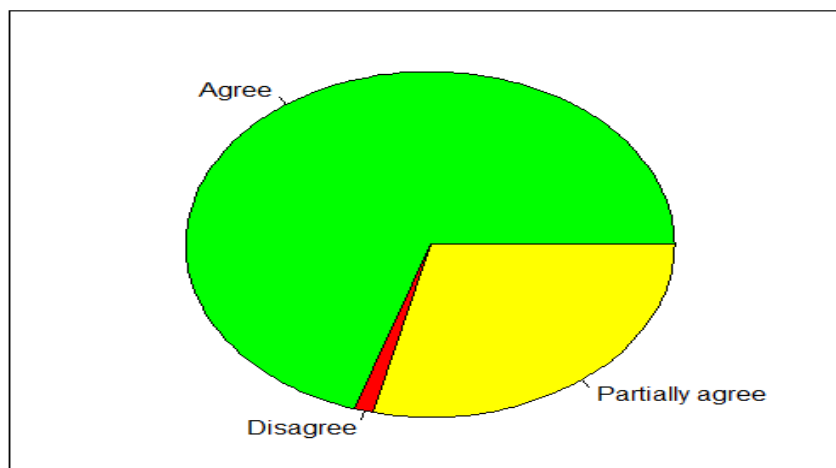
FAILURE IN FINANCIAL MANAGEMENT CAN AFFECT HEALTH



(Pie chart 3: Opinion of the students about failure in financial management affect health)

According to pie chart 3, there are 37 students (46.3%) agree that if they fail to manage their financial properly, it can affect their health, while there are 30 students(40%) tend to partially agree. The rest of the respondents are disagree which are 13.7%. We can conclude that most of the students thinking that failure in financial management can influence their health reputation.

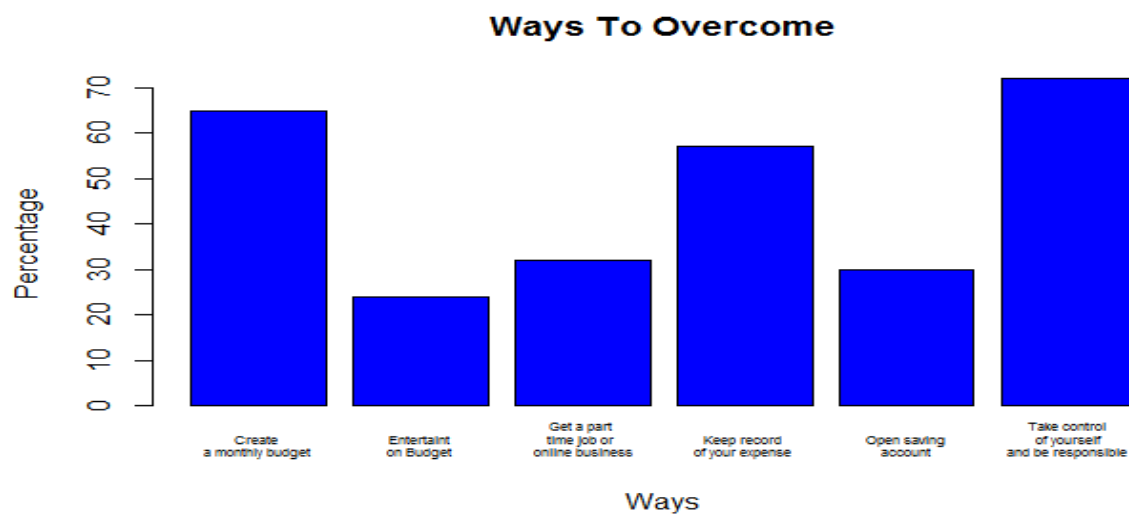
FAILURE IN FINANCIAL MANAGEMENT CAN AFFECT STUDY



(Pie chart 4: Opinion of the students about failure in financial management affect study)

According to pie chart 4, there are 56 students (70%) agree that if they fail to manage their financial properly, it can give a bad impact to their study, while there are 23 students(28.7%) tend to partially agree. The rest of the respondents are disagree which are 1.2%. We can conclude that most of the students thinking that failure in financial management can influence their study.

WAYS TO OVERCOME MONEY CRISIS



Based on the graph, 57 out of 80 students (71.3%) think that they must to take control of themselves and be responsible as one of the ways to overcome money crisis. They should know to control themselves from buying unnecessary stuffs. Next, 63.7% of the students (51 students) said that by creating a monthly budget, it can help them to overcome the crisis of money. Since budgeting allows us to create a spending plan for our money, it ensures that we will always have enough money for the things that we need need and the things that are important to us. Then, 45 students (56.3%) think that by keeping record on their money expenses can reduce the financial crisis as every cents that they use will be keep on track. So, they will always alert how much money had they spend before. 32.5% of the students suggest that by getting a part time job can overcome the money crisis. By doing so, they can earn extra pocket money and also they also learn to manage their properly. Next, 24 out of 80 students (30%) open a saving account as their way to overcome the financial crisis while 19 students (23.8%) choose to entertain on the

budget as one way of to overcome money crisis. Based on the graph, we can conclude that by controlling yourself and be responsible towards your money is the best way to overcome the financial crisis.

INCOME PER MONTH

The decimal point is 2 digit(s) to the right of the |

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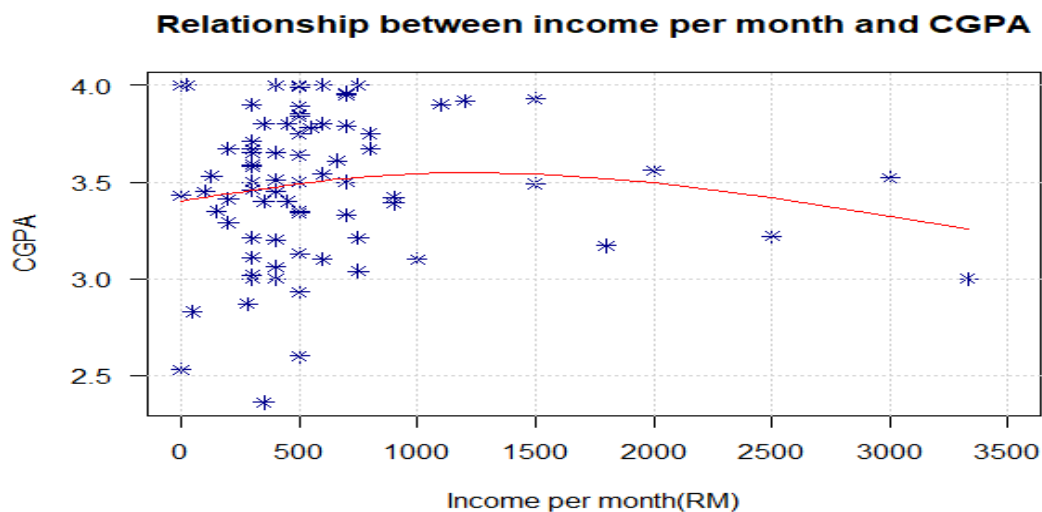
0 | 00035035
2 | 0008000000000000000555
4 | 000000055000000000000005
6 | 00006000000555
8 | 000000
10 | 00
12 | 0
14 | 00
16 |
18 | 0
20 | 0
22 |
24 | 0
26 |
28 |
30 | 0
32 | 3

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(Stem and leaf: Income of the students per month)

Based on this graph, the minimum value is RM 0 while the maximum value id RM 3330.

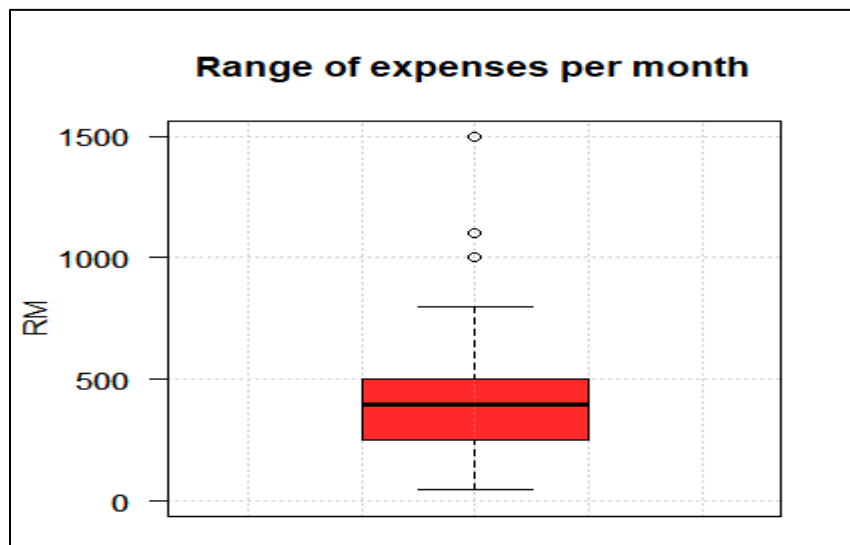
RELATIONSHIP BETWEEN INCOME OF THE RESPONDENTS PER MONTH & CGPA



(Scatter graph 1: Relationship between income of students (RM) and CGPA)

According to the scatter graph above, there are 88.75% (71) students that had source income between RM 0-RM 1000. The graph shows that the average pointer of the students with the income between RM0-RM500 is 3.43 while the average pointer of students with income RM 500-RM 1000 is 3.56. It clearly shown on the graph that some of the students with income RM 0-RM 500 get pointer below 3.0 compare to the students with income RM 500-RM 1000, all of them get pointer above 3.0. For the students with income more than RM 1000, their average pointer is 3.52. We can conclude that the students with high amount of savings, most likely to get a good CGPA.

MONEY EXPENSES



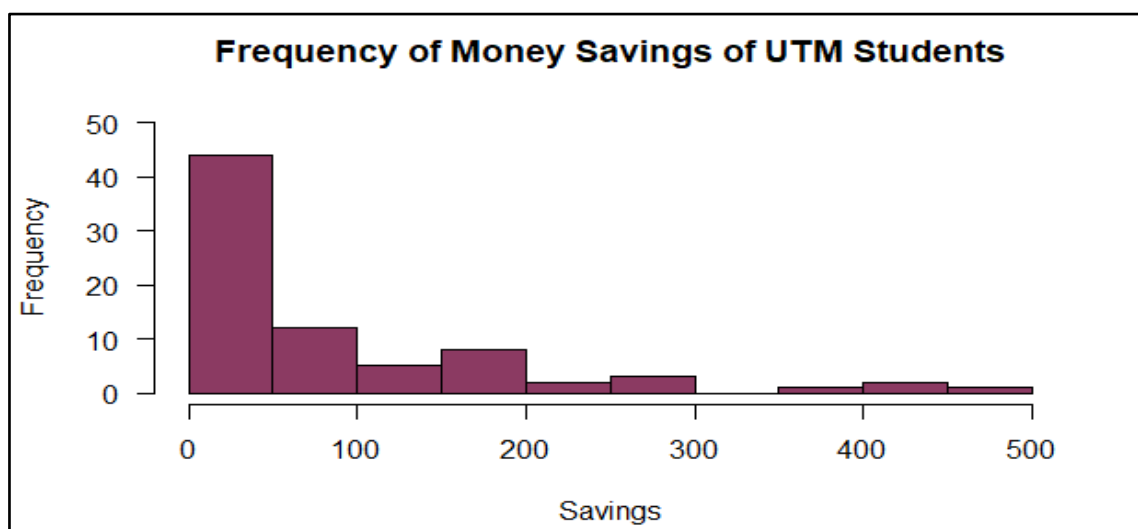
(Box plot 1: Range of expenses per month)

From the box plot graph, the minimum value of the expenses is RM 50 while the maximum value is RM 1500. The Q1, median, Q3 and interquartile range for this box plot is RM250, RM400, RM500 and RM250. There are also outliers in this graph, which are RM1000, RM1100 and RM1500. Next, the graph shows that the average of money expenses of the students per month is RM413.69.

STUDENTS' SAVINGS PER MONTH

Range of Savings	Frequency
RM0 – RM50	44
RM51 – RM100	12
RM101 – RM150	5
RM151 – RM200	10
RM201 – RM250	2
RM251 – RM300	3
RM301 – RM350	0
RM351 – RM400	1
RM401 – RM450	2
RM451 – RM500	1

(Table 1: Frequency of savings for UTM students by range)



(Histogram 2: Money savings of UTM students)

According to the histogram above, 44 students recorded to save between RM 0 to RM 50 every month which is the highest record. For savings between RM 51 to RM 100, 12 students are recorded. Next, there are 5 students who save around RM101 to RM150 every month. As many as 10 students were reported to save money between RM151 to RM200 every month. For savings between RM 201 to RM 250 and RM401 to RM450, it holds the same record which only 2 students to save money in that range. 3 students reported to save between RM251 to RM300. Furthermore, only 1 student reported to save money in range of RM351 to RM400 and RM451 to RM500. Meanwhile, no student recorded to save money in between RM301 to RM350. Based on this graph, we discovered that UTM students had acknowledged the importance of savings. Even though the savings amount for every person are different but they managed to discipline themselves to save money.

CONCLUSION

In the conclusion we can say that, financial management is a very important for a student life. Students must allocate their time wisely for management their financial at least once a week.

Throughout our studies, we find out that most of the students are not well planed about their daily life expenses and they do not focus about money saving. Furthermore, students find that hanging out with their friends will not give any positive effects towards their life. But, Some

Students well managed their financial resources and allocate their expenses very wisely

Finally, we can say that, financial management is not only important for a student's life but also play a vital role for our whole life.

APPENDIX

https://docs.google.com/forms/u/1/d/1qocvI7MYFzXC3IPxEeS2IBCgmoBvnoEV5ghoossGuu0/edit?usp=forms_home&ths=true

