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Foundation Skills in Data Analysis – MIS770

Assignment 1

Trimester 3 2021

# Part A – Survey Questions

This survey has been designed to gauge the company's employee views on current state of internal work culture, employee's likelihood to leave the company and an indication of additional financial or non-financial incentives the company can provide to increase staff retention. The survey contains some questions to collect information on staff demographics which can be used to analyse if there are trends for certain groups of staff across the questions. Apart from some demographic questions, the survey also has a few questions on current state of affairs of the company and some questions that will help the company introduce new plans and incentives to increase staff engagement and retention.

## Question 1

How old are you? please answer in decimal points for age in years and months (eg: 20 years and 6 months = 20.5 years)

**Justification**: To understand if there are employees in certain age groups that are at a higher risk of changing jobs. This will also provide insights on if there are significant differences in employees views of employee satisfaction by age group.

**Type of Variable:** Numerical

**Level of Measurement:** Continuous – Ratio Data

**Type of Visualisation:** A Histogram will be best suited to visualise this data and provide a representation of the spread of ages in the data. A frequency distribution table is another alternative to a histogram that can be used for this question.

## Question 2

How long have you been an employee at the company? – please answer in decimal points for years and months employed (eg: 2 years and 6 months = 2.5 years)

**Justification:** To understand if the employee's views on employee retention differs based on the length of their employment with the company. This will help the company understand if longer term employees are at higher risk of leaving or is it the newer employees that are looking to leave.

**Type of Variable:** Numerical

**Level of Measurement:** Continuous – Ratio Data

**Type of Visualisation:** Histogram will be best suited to visualise this data as it will visualise the binned employment length by the number of respondents. This will show the spread between long term and short-term employment.

## Question 3

What is your current annual salary range?

**Justification**: To understand if employee satisfaction increases as income level goes up thus reducing employee churn. If the findings are statistically significant, the employer can use this to review staff salary ranges or provide other incentives to lower levels of staff to improve staff retention.

**Answer Options**:

- $39,999 or less
- $40,000 to $59,999
- $60,000 to $79,999
- $80,000 to $99,000
- $100,000 to $119,999
- $120,000 to $139,999
- $140,000 and above

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used here to visualise the results. There will be 7 bars for the 7 different income group options in the bar chart.

## Question 4

**Justification**: To understand if employees that are highly educated are more likely to stay with the company or if it is employees with a lower level of education. This information can also be in combination with the other survey questions to see if there differences in views of the current culture of the company. Are more education people less satisfied with their jobs and more likely to leave?

**Answer Options**:

- High School
- College Diploma
- Bachelor's Degree
- Master's Degree
- PhD

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart will be best suited to visualise the answers to this question. There will be 5 bars and the values can be visualised as either the total count or percentage split between the groups.

## Question 5

What level of employment are you currently employed at?

**Justification**: We can use the answers to this question to support the stratified sampling method that will be used to analyse the survey responses. By breaking down the responses by level of employment, this will provide an equal representation across the population within the company. Answers to this question can also be used to see if there is a correlation between higher and lower-level workers and their likelihood to leave the company.

**Answer Options**:

- Senior Management
- Middle Management
- Lower Management/Supervisors
- Specialist
- Employee

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:**  A bar chart can be used to visualise the responses to this question. There will be 5 bars and the data can be visualised as total counts or percentages. An alternative to a bar chart would be a summary table that shows both the counts and percentage.


## Question 6

In the last 12 months, how many times has your manager spoken to you about your longer-term development plans? Please answer as whole number (eg: 2 for twice a year) or as 0 if you've not had a development session with your manager.

**Justification**: By having answers to this question, the company will have a clearer picture if managers are regularly speaking to their staff regarding their career aspirations, as one of the main reasons employees leave a company is due to the lack of career development.

**Type of Variable:** Numerical

**Level of Measurement:** Discrete - Ratio

**Type of Visualisation:**  A histogram would be best suited for this question. It will show the spread of how regular personal development discussions is occurring in the organisation.

## Question 7

I'm satisfied with the level of investment the company makes towards my training and development goals.

**Justification**: This question can be used by the company to identify if further investment is required to train and develop existing staff to increase employee retention as there are studies that have proven the link between ongoing staff training and development and increased staff engagement. (Hassan, et al., 2013)

**Answer Options:**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 5 bars and the responses can be expressed as a total count or percentage. A summary table is another alternative.

## Question 8

Since you've been employed, please specify the number of times you have changed roles internally, this can either be an internal promotion, or a change to a different role at the same level? Please answer as 0 if you've been in the same role since joining the company.

**Justification**: This will provide insights to the company if they are upskilling and developing staff, and if there is a link to improved staff satisfaction and the internal opportunities that have been provided to staff. (Chipunza & Samuel, 2009)

**Type of Variable:** Numerical

**Level of Measurement:** Discrete and Ratio

Type of Visualisation:  A frequency distribution table can be used for this question. As it is unlikely a staff can have more than 10 promotions/role changes within a company, we can group the answers into groups with a class width of 1 for the number of promotions/roles changes. In the frequency table, we will summarise by number of promotions from 0 to the maximum number of promotions/changes that we receive as a response by the total count of responses for each group. The table can also include a cumulative and relative frequency distributions. An alternative to this would be a bar chart.

## Question 9

Does your manager clearly communicate performance expectations with you?

**Justification**: A good performance appraisal process can help employees identify weak areas, thus increasing learning and development opportunities that leads to higher employee engagement and retention. This will help the company identify if they need to put steps in place to improve on communications around performance expectations. (Evans & Verlander, 2007)

**Answer Options:**

- Yes
- No

**Type of Variable:** Binary Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:** A pie chart can be used here to show the proportion of respondents who answered yes and no to this question.


## Question 10

On a scale of 1 to 5, how would you describe your working relationship with your colleagues? 1 being a poor relationship and 5 being an excellent working relationship.

**Justification**: This will provide the company with insights on the general feel of the culture within the organisation and an indication if most of the employees has a good working relationship with their colleague as there is evidence that good working relationships leads to higher employee satisfaction and increased retention. (Tadese, 2018)

**Answer Options:** Scale 1 to 5

**Type of Variable:** Numerical Data

**Level of Measurement:** Discrete and Interval

**Type of Visualisation:** A histogram can be used here. There will be 5 bars for the different scales and can be expressed as a total count or percentage. An alternative to this would be a frequency distribution table.

## Question 11

The leaders at the company have communicated a vision that motivates me? (Crosswell, 2017)

**Justification**: This will provide the company with employee perceptions on alignment of organisational visions and if the organisation vision motivates and excites the employees

**Answer Options:**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 5 bars and the responses can be expressed as a total count or percentage. A summary table is another alternative.


## Question 12

I'm adequately recognized for the contributions that I have made at work.

**Justification**: Answers to this question will help the employer identify if there is a need to improve on employee recognition and if there is a link between employee recognition and the likelihood of the employee remaining in the company.

**Answer Options:**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 5 bars and the responses can be expressed as a total count or percentage. A summary table is another alternative.

## Question 13

I'm provided with the adequate flexibility in my role to have a healthy work life balance.

**Justification**: Answers to this question will help the employer identify if there is a link between increased satisfaction with flexibility and work life balance with the retention of their employees. This will also help the employer think about any other flexible work practices that can be put in place to increase job satisfaction.

**Answer Options:**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 5 bars and the responses can be expressed as a total count or percentage. A summary table is another alternative.

## Question 14

I am provided with opportunities to work on interesting and challenging work.

**Justification**: Answers to this question will provide the employer with insights on if the company has provided opportunities for staff to be stretched and challenged. There is strong evidence that in order to retain good staff and knowledge workers, opportunities to be challenged needs to be provided. (Sabbagha, et al., 2018)

**Answer Options:**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 5 bars and the responses can be expressed as a total count or percentage. A summary table is another alternative.

# Question 15

How likely are you to look for a new job in the next 12 months? 1 being not likely, 5 being very likely

**Justification**: To identify the proportion of employees that are likely to leave in the next 12 months. By having responses to this question, the company can put in steps to reduce the attrition rate over the next 12 months or plans to fill in the gaps that may occur when employees do leave.

**Answer Options:**

- Likely
- Neutral
- Unlikely


**Type of Variable:** Categorical

**Level of Measurement:** Ordinal Data

**Type of Visualisation:** Pie chart with the 3 answer options and proportion of respondents.


# Question 16

Which of the following options would be the main reason to prompt you to look for a new job with a different employer:

**Justification**: Having this information is useful as it will provide the employer with insights if the reason staff are leaving the company is due to internal factors that can be investigated further to reduce employee attrition, or if it's due to external factors where not much can be done.

**Answer Options**:

- Lack of career progression
- Inadequate salary
- Looking to change sectors
- Seeking better work life balance


**Type of Variable:** Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 4 bars and the responses can be expressed as a total count or percentage. A summary table or pie chart is another alternative.

## Question 17

If the company provides you with a 5% increase on your annual remuneration, would this keep you happy and allow you work with the company for a longer period?

**Justification**: This will help the employer decide if bumping up staff salaries by 5% will help retain staff longer, thus reducing financial and non-financial costs that are associated with staff attrition.

**Answer Options:**

- Yes
- No

**Type of Variable:** Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:** A pie chart can be used here to show the proportion of respondents who answered yes and no to this question.


## Question 18

If the company were to provide some additional non-financial incentives, which of these incentives will be the most appealing to you and would prevent you from leaving your job?

**Justification**: This information will help the company decide if there's any additional perks that they could provide to increase employee retention. It will help the company identify key employee motivators, thus helps the company build a good work culture within the company.

**Answer Options**:

- Flexible working hours
- Hybrid working
- Compressed work week (4-day week)
- Additional purchased annual leave

**Type of Variable:** Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:** A bar chart can be used to visualise this question. There will be 4 bars and the responses can be expressed as a total count or percentage. A summary table or pie chart is another alternative.

## Question 19

Which of these personal development activities do you think the company should offer to increase employee engagement and thus retaining staff?

**Justification**: We know lack of personal development opportunities is one of the driving reasons for employees to leave their current job. By including this question in the survey, it will provide the company insights on the type of personal development activities that the staff are wanting that may keep them staying with the company longer.

**Answer Options:**

- Longer term job secondment (3 months or more)
- Shorter term cross team project work (3 months or less)
- Formal education (eg: Tertiary Education/ Program specific conferences)
- Self-directed learning (eg: Study Academic Texts/online short courses)

**Type of Variable:** Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:**  A pie chart or a bar chart can be used here.

## Question 20

Would you tell your friends and family that this is a fun place to work at?

**Justification**: This will provide an indication to the company if there is a good and fun working culture within the organisation and that staff are not only likely to remain, but also recommend the company to others.

**Answer Options:**

- Yes
- No

**Type of Variable:** Binary Categorical

**Level of Measurement:** Nominal Data

**Type of Visualisation:**  A pie chart can be used here to show the proportion of respondents who answered yes and no to this question.

# Part B – Survey Implementation & Collection

## Task 6

This employee survey will be designed to be completed anonymously online. As it is a staff engagement survey, it is key to communicate that the survey is anonymous to ensure that staff feel safe and comfortable to complete the survey. The survey will be distributed to all levels of staff except for the decision makers who are the directors and CEO of the company as they will be reviewing the results of the survey. New staff who have been with the company for less than 3 months will be excluded from the survey as their views could skew the results.

Advantages of running an online survey is that it is quick and easy, thus staff will only have to spend a small portion of their working hours completing the survey. Online surveys are also a low-cost option for the company to gauge the views of their staff, and because it is low cost, the company can run the same survey multiple times through the year to see if views are improving after the company puts some new changes forward to improve employee retention.

## Task 7

The target audience for this survey will be all employees except for Directors and the CEO at the company. The more responses across all levels of employments will provide better insights on the state of the current culture of the company and more understanding on what motivators are best in keeping employees engaged and retained.

The sampling method used will depend on the size of the company. For small companies, where there is less than 100 staff, all responses to the survey should be used in the analysis. When the company is a larger company, the best suited sampling method to gain an understanding of employee satisfaction and retention, a stratified sampling method should be used, as in most companies, there are clear hierarchical structures, and the number of staff in more senior positions is always going to be far less than staff at an employee level. Thus, in order to gain a more representative survey response, the responses should be broken into different stratums based on the answers to question 5 of the survey around level of employment. Once the strata and their proportions based on the entire population have been identified, the said percentage is randomly sampled from the strata. For example, if 20% of the answers to question 5 were from staff at a senior management level, 20% out of the total count of responses from that stratum is randomly selected.

Stratified sampling method ensures that every group of the total population is represented in the sample. It is important to maintain the ratios of the subgroups when randomly selecting the responses. (Berenson, et al., 2020)

# References

Berenson, M. L., Levine, D. M., Szabat, K. A. & Stephan, D. F., 2020. *Basic Business Statistics Concepts and Applications.* 14 ed. s.l.:Pearson.

Chipunza, C. & Samuel, M. O., 2009. Employee Retention and Turnover: Using Motivational variables as a panacea.

Crosswell, L., 2017. *20 Employee Engagement Survey Questions You Should Ask.* [Online]
Available at: https://www.cultureamp.com/blog/employee-engagement-survey-questions
[Accessed 28 November 2021].

Evans, R. M. & Verlander, G. E., 2007. Strategies for Improving Employee Retention. *Clinial Leadership & Management Review,* 21(2).

Hassan, W. et al., 2013. The Effect of Training on Employee Retention. *Global Journal of Management and Business Research Administration and Management,* 13(6).

Sabbagha, M. D. S., Ledimo, O. & Martins, N., 2018. Predicting Staff Retention from Employee Motivation and Job Satisfaction. *Journal of Psychology in Africa,* 28(2).

Tadese, W. M., 2018. Factors Affecting Employee Retention in Ethiopian Public Organizations. *Journal of Strategic Human Resouce Management,* 7(3).