Mobile Banking among Sri Lankan Tamil Users - an Analysis

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Brief

Target population Sri Lankan Tamils using Mobile Banking

Personally contacted around 40 friends asked to propagate. But it didn't flow well.

When the above method is saturated then posted to LinkedIn; got a question and hundreds of views but only 1 entry came after posting there. That's mainly because of the ethnicity based limitation.

Used online form (Google Form) to collect the data.

Used R as the analysis tool.

The Questionnaire

Three Sections

- Demographic
- Technical and General Domain Knowledge
- Mobile Banking

24 Questions

40 (Sri Lankan Tamil) Respondents

GitHub Link: https://github.com/kanarupank/statistical_inference_presentation

Data Descriptive Analysis

Tried Pie-Charts with R

https://github.com/kanarupank/statistical_inference_presentation/blob/master/Descriptive%20Analysis%20of%20Questionnaire%20responses.pdf
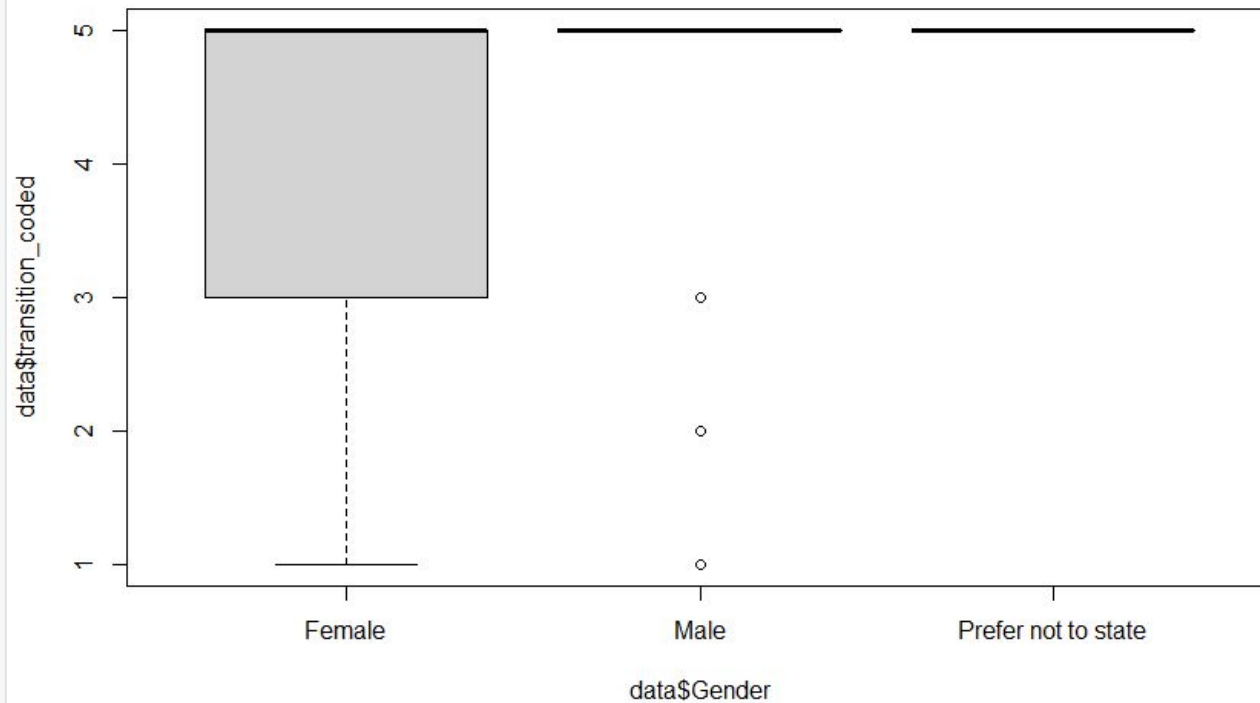
Google Form:

https://docs.google.com/forms/d/1moEosiuIbY_4GYLgj-YpjrZhCM9vp6KS2qPuMpiStwY/edit#responses

Hypothesis Testing

Null Hypothesis: The perception of the transition smoothness (from tradition to mobile banking) is indifferent to gender

Alternative Hypothesis: Gender plays a role in the transition smoothness

Hypothesis Testing

Table

```
     Female Male Prefer not to state
1        0    1                     0
2        0    5                     0
3        2    1                     0
5        6   24                     1
>
```

Transition Smoothness - Gender

smoothness	male	female
5	24	6
3	1	2
2	5	0
1	1	0

Chi-Squared test to measure the difference

chisq.test(c(df$smoothness,df$smoothness), c(df$male,df$female))

```
> chisq.test(c(df$smoothness,df$smoothness),
+ c(df$male,df$female))

        Pearson's Chi-squared test

data:  c(df$smoothness, df$smoothness) and c(df$male, df$female)
X-squared = 16, df = 15, p-value = 0.3821

Warning message:
In chisq.test(c(df$smoothness, df$smoothness), c(df$male, df$female)) :
  Chi-squared approximation may be incorrect
>
```

Hypothesis testing conclusion

Not enough evidence to reject the null hypothesis.

Fails to reject the null hypothesis that is the transition smoothness is indifferent to Gender.

Hypothesis Testing 2

Null Hypothesis: The feedbacks (optional) received in this particular Questionnaire are equally given by Males and Females

Alternative Hypothesis: Females has given more feedback.

Will check for the statistical significance with the available (limited) data.
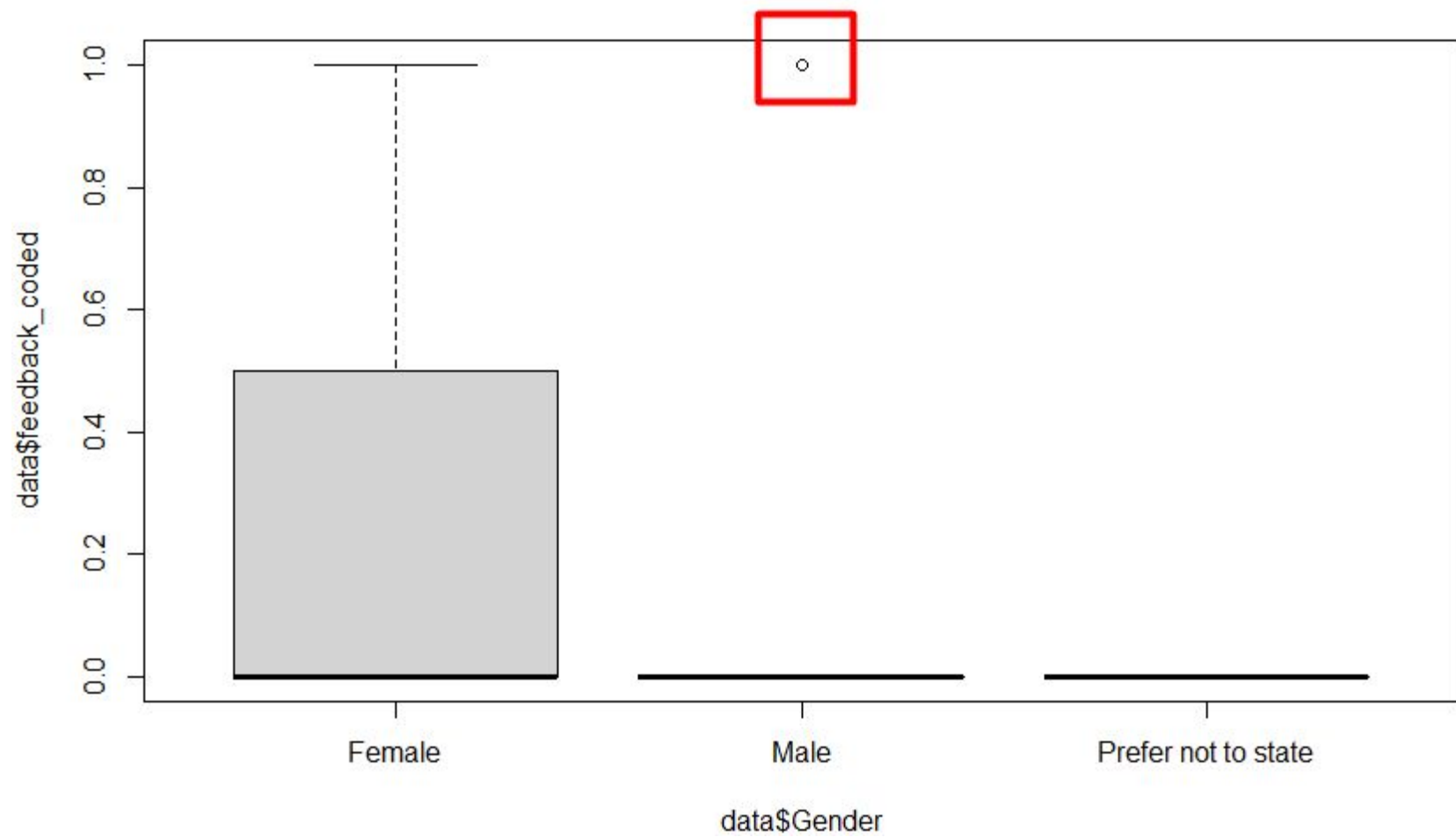
feedback	male	female
0	25	6
1	6	2

Chi-Squared test to measure the difference

chisq.test(c(df$feedback,df$feedback), c(df$male,df$female))

```
> chisq.test(c(df$feedback,df$feedback), c(df$male,df$female))

        Pearson's Chi-squared test

data:  c(df$feedback, df$feedback) and c(df$male, df$female)
X-squared = 2, df = 2, p-value = 0.3679

Warning message:
In chisq.test(c(df$feedback, df$feedback), c(df$male, df$female)) :
  Chi-squared approximation may be incorrect
```

Because the p-value is 0.37 > 0.05, the test is inconclusive.

Your suggestions and feedback for future enhancements (optional).

8 responses

Banking app should include more features which make customers to spend more time in the bank. It's a time waste to wait for a banking officer to fulfill our every requirements.

Make it more user-friendly

Our datas are being stolen by some famous Apps. Bank should guarantee that our banking details won't be stolen during mobile banking.

Itz should make in easy way to handle uneducated people also.

Every bank must be Accessible through online banking

Unable to engage in online purchases with some vendors. Better, if they try to include a number of key vendors.

Could get rid off the transfer fee for other bank

No

Your banking operation time of the day in descending order from more intense to less. Consider that Pre office hour: 3 am to 9 am. Office Hours: 9 am - 5 pm. Post office hours: 5 pm-3 am. For example, if your banking operations are mostly aligned with office hours, at times at night and far less in early morning hours then choose the third option.

40 responses
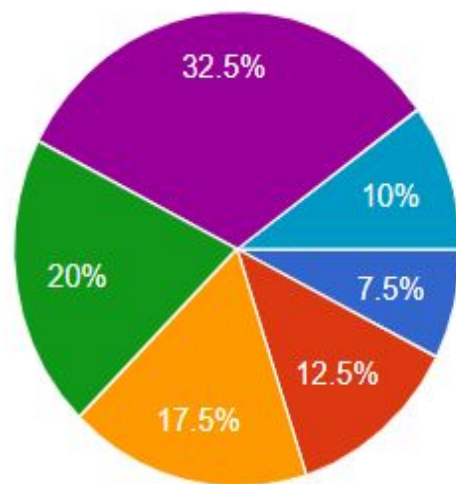
- Pre office hours, office hours, post office hours
- Pre office hours, post office hours, office hours,
- Office hours, pre office hours, post office hours
- Office hours, post office hours, pre office hours
- Post office hours, office hours, pre offi...
- Post office hours, pre office hours, offi...

Chart values:
- 32.5%
- 10%
- 7.5%
- 12.5%
- 17.5%
- 20%

Points to Ponder

1. Define the hypothesis first; it will direct, motivate the flow compared to generic and superficial questions.

2. ranges when possible. Ex: Smart phone using years vs Banking App using years

3. Could have better juxtaposed before using Mobile Banking and after. For instance the question regarding the banking activity time, in hindsight could have been better. Because it's not well directed ended being not much useful.

4. Data amount-wise and diversity-wise not representative; generalizing the inferences to the population wouldn't cut. The Chi-Squared with less than 5 entries.

Q & A

Thank you.