# Perception of Founders' Age in Startups

# Dr Preet Deep Singh

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#### Abstract

I look at the perception of the age of startup founders. I find that founders in their early thirties are less likely to succeed and get funded and more likely to abandon. Females rated female founders aged 32,33 as consistently lower than 22,23-year-old female founders to succeed. Males in their early twenties were more likely to abandon their startup than females in their early forties. This points to a stronger perceived bias within females than with the general population which could have social reasons. Male respondents felt that 32,33 year old male founders were more likely to abandon their startup as compared to 32,33-year-old females. This research suggests specific steps for founders while pitching to customers/buyers.

# 1 Introduction

TODO:1: Reread, sanitation biblio-style: "apalike"

I take reference from Singh [2021b], Singh [2021a] and Look at the perception of founder age measured by the probability of funding, probability of success and probability of abandonment of the startup. Younger males are more likely to succeed than MidAge females. Surprisingly females are driving this. It could be because 31,32 is the age for going the family way. This is evident in the fact that they rate 21,22 year old female founders as more likely to succeed, even more than YoungMale.

Consistently females have estimated the probability of funding for a startup founded by 31,32 year old females as much lower than that estimated by male respondents. Funding is a measure of how respondents feel investors would perceive the startup/founders. This means female respondents feel that investors would also not value 31,32 year old female founders, as opposed to male respondents. The estimate of female respondents for a startup founded by 21,22 year old females is higher than that of a startup founded by 31,32 year old females.

Male respondents felt that the probability of funding for a startup founded by young females was higher than that founded by older males. Surprisingly males also felt the probability of funding for a startup founded by 32,33 year old female

founders was higher than that of a startup founded by 32,33 year old males. Their estimate for funding probability for older males was lower than that of 32,33 year old female founders also. On the contrary, female respondents felt that the probability of 42,43 year old males getting funded for their startup was higher than that of a startup founded by 32,33 year old females.

22,23 year old males were more likely to abandon their startup than 42,43 year old females. Males estimated that 32,33 year old females were more likely to abandon their startup as compared to 42,43 year old female founders who were also less likely than 22,23 year old males to abandon theirs. Surprisingly male respondents felt that 32,33 year old males were more likely than 32,33 year old females to abandon their startup. Perception is important because it leads to ABC  $^1$ . #EDIT THIS

# 2 Literature Review

ADD CONTENT

#### 2.0.1 Age

While experience is considered as a major requirement in terms of employment, it may not be so for startups as we have seen success stories of college dropouts such as Bill Gates, Ritesh Agrawal, Steve Jobs and many other<sup>2</sup>. However, the spirit of entrepreneurship is not very strong in India. The education system therein does not lead to employability or maturity of the students as much as international curriculum. This is ingrained in people. Youth might be associated with recklessness and immaturity or inability to perceive risk<sup>3</sup>.

We expect young startups to be perceived negatively. At 22,23, it is unlikely that the found

# 3 Data and Method

#### 3.1 Variables

#### 3.1.1 Success

Success is not defined. The definition is kept open ended and it is based on perception of the participants.

<sup>&</sup>lt;sup>1</sup>CITE LITERATURE HERE

<sup>&</sup>lt;sup>2</sup>FIND AN ARTICLE ABOUT THIS

<sup>&</sup>lt;sup>3</sup>FIND REFERENCES

### 3.1.2 Funding

Hot stuff. News captures. How others/investors would perceive the founders and the startup.

#### 3.1.3 Abandonment

Associated with females that they might leave the startup due to societal pressure, matrimony or family needs.

#### 3.1.4 Age

The founders across cases are aged 22,23 years (Case 1); 32,33 years (Case 2); and 42,43 years (Case 3). We

#### 3.2 Method

We administered a survey to 300 participants. They were divided in six groups. Each group was given an identical case study of a startup and were asked to estimate the probability of success, probability of funding and probability of abandoning the startup. Each group had one of six cases as given below.

#### 3.3 Data Summary

Summary of the data and read out. We name the cases as follows: Case 1a: Female founders, 20 named as FemaleYoung Case 1b: Male founders, 20, named as MaleYoung

Case 2a: Female founders, 30, named as FemaleMidAge Case 2b: Male founders, 30, named as MaleMidAge

Case 3a: Female founders, 40, named as FemaleOld Case 3b: Male founders, 40, named as MaleOld

Table 1: This tables shows the summary of responses in the case where the startup founders were females aged 22 and 23 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	48	0.688	0.231	0.200	0.500	0.900	1.000
Funding	50	0.674	0.225	0.100	0.500	0.800	1.000
Abandon	51	0.425	0.290	0.000	0.200	0.550	1.000

Table 2: This tables shows the summary of responses in the case where the startup founders were females aged 32 and 33 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	51	0.620	0.219	0.000	0.500	0.800	1.000
Funding	50	0.618	0.230	0.000	0.500	0.800	1.000
Abandon	51	0.429	0.287	0.000	0.200	0.550	1.000

Table 3: This tables shows the summary of responses in the case where the startup founders were females aged 42 and 43 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	53	0.640	0.237	0.100	0.500	0.800	1.000
Funding	53	0.647	0.197	0.200	0.500	0.800	1.000
Abandon	53	0.353	0.266	0.000	0.100	0.500	1.000

Table 4: This tables shows the summary of responses in the case where the startup founders were males aged 22 and 23 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	50	0.694	0.200	0.200	0.600	0.800	1.000
Funding	50	0.636	0.216	0.200	0.500	0.800	1.000
Abandon	50	0.468	0.284	0.000	0.225	0.700	1.000

Table 5: This tables shows the summary of responses in the case where the startup founders were males aged 32 and 33 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	50	0.632	0.257	0	0.4	0.8	1
Funding	50	0.604	0.237	0.100	0.500	0.800	1.000
Abandon	50	0.436	0.272	0.000	0.225	0.500	1.000

Table 6: This tables shows the summary of responses in the case where the startup founders were males aged 42 and 43 years.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Success	50	0.662	0.226	0.100	0.500	0.875	1.000
Funding	48	0.613	0.223	0.200	0.500	0.800	1.000
Abandon	50	0.404	0.296	0.000	0.200	0.600	1.000

#### 3.4 Results

Graph on average results. This could be those box plots.

#### 3.5 Success

We look at the values for probability of success as estimated by our respondents across various age groups.

# Boxplot of estimated success probability 1.00 SSOONS 0.75 0.50 FemaleMidAge FemaleOld FemaleYoung MaleMidAge MaleOld MaleYoung Category

Figure 1: This box plot shows the probablity of success as estimated across males and females and different age lvels

## 3.6 Funding

# 3.7 Abandonment

## 3.8 Gender wise break up

#### 3.8.1 Success

I compare how probability of success changes with the age of the founders changes with the gender of the respondents.

The mean estimate of Success of a startup founded by FemaleYoung founders is 0.69. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by

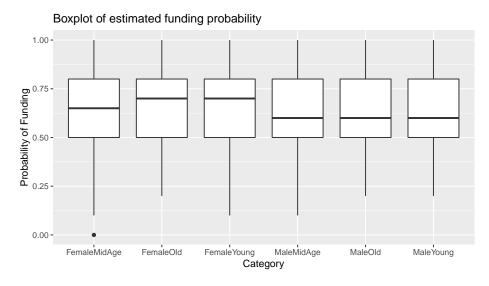


Figure 2: This box plot shows the probablity of funding as estimated across males and females and different age levels.

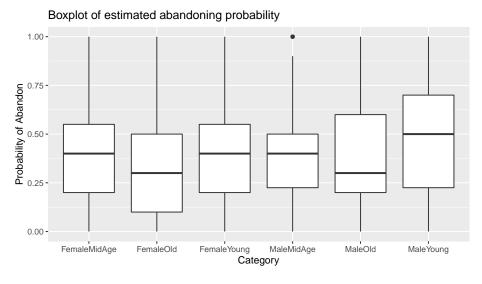


Figure 3: This box plot shows the probability of abandoning as estimated across males and females and different age levels.

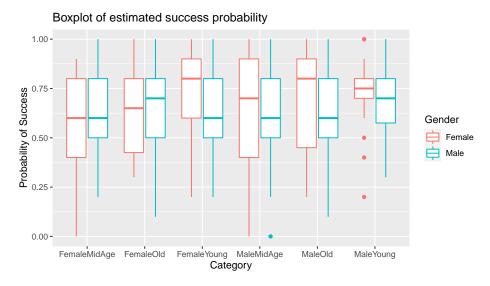


Figure 4: This box plot shows the probablity of success as estimated by males and females across male and female founders with different education levels.

FemaleYoung is 0.18. The mean estimate of Success of a startup founded by FemaleYoung founders as per Malerespondents is 0.65.

The mean estimate of Success of a startup founded by Female Young founders as per Female respondents is 0.75.

The mean estimate of Success of a startup founded by FemaleMidAge founders is 0.62. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by FemaleMidAge is 0.46. The mean estimate of Success of a startup founded by FemaleMidAge founders as per Malerespondents is 0.64.

The mean estimate of Success of a startup founded by FemaleMidAge founders as per Female respondents is 0.59.

The mean estimate of Success of a startup founded by FemaleOld founders is 0.64. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by FemaleOld is 0.99. The mean estimate of Success of a startup founded by FemaleOld founders as per Malerespondents is 0.64.

The mean estimate of Success of a startup founded by FemaleOld founders as per Female respondents is 0.64.

The mean estimate of Success of a startup founded by MaleYoung founders is 0.69. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by MaleYoung is 0.55. The mean estimate of Success of a startup founded by MaleYoung founders as per Malerespondents is 0.68.

The mean estimate of Success of a startup founded by MaleYoung founders as per Female respondents is 0.72.

The mean estimate of Success of a startup founded by MaleMidAge founders is 0.63. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by MaleMidAge is 0.73. The mean estimate of Success of a startup founded by MaleMidAge founders as per Malerespondents is 0.62.

The mean estimate of Success of a startup founded by MaleMidAge founders as per Female respondents is 0.65.

The mean estimate of Success of a startup founded by MaleOld founders is 0.66. The p-value of the difference between estimated probability of Success estimated by male respondents and female respondents for startups founded by MaleOld is 0.53. The mean estimate of Success of a startup founded by MaleOld founders as per Malerespondents is 0.65.

The mean estimate of Success of a startup founded by MaleOld founders as per Female respondents is 0.69.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleMidAge is 0.14.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleOld is 0.31.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleYoung is 0.88.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleMidAge is 0.26.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleOld is 0.58.

The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and FemaleOld is 0.66.

The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleYoung is 0.08.

The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleMidAge is 0.8.

The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleOld is 0.34.

The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleYoung is 0.21.

The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleMidAge is 0.88.

The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleOld is 0.62.

The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleMidAge is 0.18.

The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleOld is 0.46.

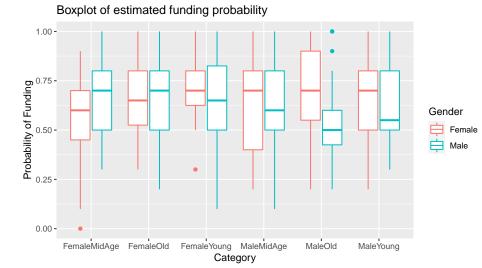
The p-value of the difference between estimated probability of Success for startups founded by MaleMidAge and MaleOld is 0.54.

The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleMidAge as estimated by Male respondents

is 0.78. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleMidAge as estimated by Female respondents is 0.04. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleOld as estimated by Male respondents is 0.8. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleOld as estimated by Female respondents is 0.16. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleYoung as estimated by Male respondents is 0.63. The p-value of the difference between estimated probability of Success for startups founded by Female Young and Male Young as estimated by Female respondents is 0.67. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleMidAge as estimated by Male respondents is 0.56. The p-value of the difference between estimated probability of Success for startups founded by Female Young and MaleMidAge as estimated by Female respondents is 0.25. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleOld as estimated by Male respondents is 0.86. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and MaleOld as estimated by Female respondents is 0.48. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and FemaleOld as estimated by Male respondents is 0.98. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and FemaleOld as estimated by Female respondents is 0.52. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleYoung as estimated by Male respondents is 0.42. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleYoung as estimated by Female respondents is 0.08. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleMidAge as estimated by Male respondents is 0.75. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleMidAge as estimated by Female respondents is 0.5. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleOld as estimated by Male respondents is 0.9. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleOld as estimated by Female respondents is 0.22. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleYoung as estimated by Male respondents is 0.46. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleYoung as estimated by Female respondents is 0.28. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleMidAge as estimated by Male respondents is 0.74. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleMidAge as estimated by Female respondents is 0.92. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleOld as estimated by Male respondents is 0.93. The p-value of the difference between estimated probability of Success for startups founded by FemaleOld and MaleOld as estimated by Female respondents is 0.53. The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleMidAge as estimated by Male respondents is 0.27. The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleMidAge as estimated by Female respondents is 0.4. The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleOld as estimated by Male respondents is 0.48. The p-value of the difference between estimated probability of Success for startups founded by MaleYoung and MaleOld as estimated by Female respondents is 0.72. The p-value of the difference between estimated probability of Success for startups founded by MaleMidAge and MaleOld as estimated by Male respondents is 0.66. The p-value of the difference between estimated probability of Success for startups founded by MaleMidAge and MaleOld as estimated by Female respondents is 0.64.

SEE ABOVE THIS LINE.

#### 3.8.2 Funding



As visible in Figure ??, the estimation of the funding of the startup also varies as per the gender of the respondent.

The mean estimate of Funding of a startup founded by FemaleYoung founders is 0.67. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by FemaleYoung is 0.29. The mean estimate of Funding of a startup founded by FemaleYoung founders as per Female respondents is 0.72.

The mean estimate of Funding of a startup founded by FemaleYoung founders as per Male respondents is 0.65.

The mean estimate of Funding of a startup founded by FemaleMidAge founders is 0.62. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by FemaleMidAge is 0.02. The mean estimate of Funding of a startup founded by FemaleMidAge founders as per Female respondents is 0.52.

The mean estimate of Funding of a startup founded by FemaleMidAge founders as per Male respondents is 0.68.

The mean estimate of Funding of a startup founded by FemaleOld founders is 0.65. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by FemaleOld is 0.94. The mean estimate of Funding of a startup founded by FemaleOld founders as per Female respondents is 0.65.

The mean estimate of Funding of a startup founded by FemaleOld founders as per Male respondents is 0.65.

The mean estimate of Funding of a startup founded by MaleYoung founders is 0.64. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by MaleYoung is 0.74. The mean estimate of Funding of a startup founded by MaleYoung founders as per Female respondents is 0.65.

The mean estimate of Funding of a startup founded by MaleYoung founders as per Male respondents is 0.63.

The mean estimate of Funding of a startup founded by MaleMidAge founders is 0.6. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by MaleMidAge is 0.39. The mean estimate of Funding of a startup founded by MaleMidAge founders as per Female respondents is 0.64.

The mean estimate of Funding of a startup founded by MaleMidAge founders as per Male respondents is 0.58.

The mean estimate of Funding of a startup founded by MaleOld founders is 0.61. The p-value of the difference between estimated probability of Funding estimated by male and female respondents for startups founded by MaleOld is 0.02. The mean estimate of Funding of a startup founded by MaleOld founders as per Female respondents is 0.71.

The mean estimate of Funding of a startup founded by MaleOld founders as per Male respondents is 0.55.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleMidAge is 0.22.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleOld is 0.52.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleYoung is 0.39.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleMidAge is 0.13.

The p-value of the difference between estimated probability of Funding for

startups founded by FemaleYoung and MaleOld is 0.18.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and FemaleOld is 0.49.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleYoung is 0.69.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleMidAge is 0.77.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleOld is 0.9.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleYoung is 0.78.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleMidAge is 0.32.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleOld is 0.41.

The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleMidAge is 0.48.

The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleOld is 0.6.

The p-value of the difference between estimated probability of Funding for startups founded by MaleMidAge and MaleOld is 0.86.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleMidAge as estimated by Male respondents is 0.6. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleMidAge as estimated by Female respondents is 0.01. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleOld as estimated by Male respondents is 0.94. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleOld as estimated by Female respondents is 0.35. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleYoung as estimated by Male respondents is 0.7. The p-value of the difference between estimated probability of Funding for startups founded by Female Young and Male Young as estimated by Female respondents is 0.36. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleMidAge as estimated by Male respondents is 0.25. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleMidAge as estimated by Female respondents is 0.26. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleOld as estimated by Male respondents is 0.09. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleOld as estimated by Female respondents is 0.94. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and FemaleOld as estimated by Male respondents is 0.49. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and FemaleOld as estimated by Female respondents is 0.1. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleYoung as estimated by Male respondents is 0.33. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleYoung as estimated by Female respondents is 0.11. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleMidAge as estimated by Male respondents is 0.09. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleMidAge as estimated by Female respondents is 0.13. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleOld as estimated by Male respondents is 0.02. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleOld as estimated by Female respondents is 0.02. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleYoung as estimated by Male respondents is 0.72. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleYoung as estimated by Female respondents is 1. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleMidAge as estimated by Male respondents is 0.22. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleMidAge as estimated by Female respondents is 0.87. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleOld as estimated by Male respondents is 0.06. The p-value of the difference between estimated probability of Funding for startups founded by FemaleOld and MaleOld as estimated by Female respondents is 0.43. The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleMidAge as estimated by Male respondents is 0.4. The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleMidAge as estimated by Female respondents is 0.88. The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleOld as estimated by Male respondents is 0.15. The p-value of the difference between estimated probability of Funding for startups founded by MaleYoung and MaleOld as estimated by Female respondents is 0.44. The p-value of the difference between estimated probability of Funding for startups founded by MaleMidAge and MaleOld as estimated by Male respondents is 0.65. The p-value of the difference between estimated probability of Funding for startups founded by MaleMidAge and MaleOld as estimated by Female respondents is 0.34.

#### 3.8.3 Abandon

As visible in Figure 5, the estimation of the abandoning of the startup also varies as per the gender of the respondent.

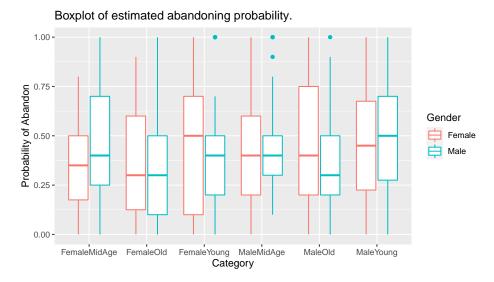


Figure 5: This box plot shows the probability of abandoning as estimated by males and females across male and female founders with different education levels.

The mean estimate of Abandon of a startup founded by FemaleYoung founders is 0.43. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung as estimated by male and female respondents is 0.77. The mean estimate of Abandon of a startup founded by FemaleYoung founders as per male respondents is 0.42.

The mean estimate of Abandon of a startup founded by FemaleYoung founders as per female respondents is 0.44.

The mean estimate of Abandon of a startup founded by FemaleMidAge founders is 0.43. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge as estimated by male and female respondents is 0.12. The mean estimate of Abandon of a startup founded by FemaleMidAge founders as per male respondents is 0.48.

The mean estimate of Abandon of a startup founded by FemaleMidAge founders as per female respondents is 0.36.

The mean estimate of Abandon of a startup founded by FemaleOld founders is 0.35. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld as estimated by male and female respondents is 0.65. The mean estimate of Abandon of a startup founded by FemaleOld founders as per male respondents is 0.34.

The mean estimate of Abandon of a startup founded by FemaleOld founders as per female respondents is 0.38.

The mean estimate of Abandon of a startup founded by MaleYoung founders is 0.47. The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung as estimated by male and female respondents

is 0.74. The mean estimate of Abandon of a startup founded by MaleYoung founders as per male respondents is 0.48.

The mean estimate of Abandon of a startup founded by MaleYoung founders as per female respondents is 0.45.

The mean estimate of Abandon of a startup founded by MaleMidAge founders is 0.44. The p-value of the difference between estimated probability of Abandon for startups founded by MaleMidAge as estimated by male and female respondents is 0.38. The mean estimate of Abandon of a startup founded by MaleMidAge founders as per male respondents is 0.47.

The mean estimate of Abandon of a startup founded by MaleMidAge founders as per female respondents is 0.4.

The mean estimate of Abandon of a startup founded by MaleOld founders is 0.4. The p-value of the difference between estimated probability of Abandon for startups founded by MaleOld as estimated by male and female respondents is 0.39. The mean estimate of Abandon of a startup founded by MaleOld founders as per male respondents is 0.37.

The mean estimate of Abandon of a startup founded by MaleOld founders as per female respondents is 0.45.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleMidAge is 0.95.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleOld is 0.19.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleYoung is 0.46.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleMidAge is 0.85.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleOld is 0.71.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and FemaleOld is 0.16.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleYoung is 0.5.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleMidAge is 0.91.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleOld is 0.66.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleYoung is 0.04.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleMidAge is 0.12.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleOld is 0.36.

The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleMidAge is 0.57.

The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleOld is 0.27.

The p-value of the difference between estimated probability of Abandon for startups founded by MaleMidAge and MaleOld is 0.58.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleMidAge as estimated by Male respondents is 0.4. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleMidAge as estimated by Female respondents is 0.35. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleOld as estimated by Male respondents is 0.24. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and FemaleOld as estimated by Female respondents is 0.53. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleYoung as estimated by Male respondents is 0.37. The p-value of the difference between estimated probability of Abandon for startups founded by Female Young and Male Young as estimated by Female respondents is 0.94. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleMidAge as estimated by Male respondents is 0.47. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleMidAge as estimated by Female respondents is 0.64. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleOld as estimated by Male respondents is 0.55. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleYoung and MaleOld as estimated by Female respondents is 0.92. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and FemaleOld as estimated by Male respondents is 0.06. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and FemaleOld as estimated by Female respondents is 0.8. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleYoung as estimated by Male respondents is 0.99. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleYoung as estimated by Female respondents is 0.28. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleMidAge as estimated by Male respondents is 0.87. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleMidAge as estimated by Female respondents is 0.63. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleOld as estimated by Male respondents is 0.17. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and MaleOld as estimated by Female respondents is 0.29. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleYoung as estimated by Male respondents is 0.04. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleYoung as estimated by Female respondents is 0.46. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleMidAge as estimated by Male respondents is 0.06. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleMidAge as estimated by Female respondents is 0.85. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleOld as estimated by Male respondents is 0.61. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleOld as estimated by Female respondents is 0.47. The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleMidAge as estimated by Male respondents is 0.86. The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleMidAge as estimated by Female respondents is 0.56. The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleOld as estimated by Male respondents is 0.15. The p-value of the difference between estimated probability of Abandon for startups founded by MaleYoung and MaleOld as estimated by Female respondents is 0.98. The p-value of the difference between estimated probability of Abandon for startups founded by MaleMidAge and MaleOld as estimated by Male respondents is 0.2. The p-value of the difference between estimated probability of Abandon for startups founded by MaleMidAge and MaleOld as estimated by Female respondents is 0.56.

# 4 Conclusion

The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleYoung is 0.08. The p-value of the difference between estimated probability of Success for startups founded by FemaleYoung and FemaleMidAge as estimated by Female respondents is 0.04. The p-value of the difference between estimated probability of Success for startups founded by FemaleMidAge and MaleYoung as estimated by Female respondents is 0.08.

The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge as estimated by male and female respondents is 0.02. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and FemaleMidAge as estimated by Female respondents is 0.01. The p-value of the difference between estimated probability of Funding for startups founded by FemaleYoung and MaleOld as estimated by Male respondents is 0.09. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleMidAge as estimated by Male respondents is 0.09. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleOld as estimated by Male respondents is 0.02. The p-value of the difference between estimated probability of Funding for startups founded by FemaleMidAge and MaleOld as estimated by Female respondents is 0.02. The p-value of the

difference between estimated probability of Funding for startups founded by FemaleOld and MaleOld as estimated by Male respondents is 0.06.

The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleYoung is 0.04. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleMidAge and FemaleOld as estimated by Male respondents is 0.06. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleYoung as estimated by Male respondents is 0.04. The p-value of the difference between estimated probability of Abandon for startups founded by FemaleOld and MaleMidAge as estimated by Male respondents is 0.06.

Younger males are more likely to success than MidAge females. Surprisingly females are driving this. It could be because 31,32 is the age for going the family way. This is evident in the fact that they rate 21,22 year old female founders as more likely to succeed, even more than YoungMale.

Consistently females have estimated the probability of funding for a startup founded by 31,32 year old females as much lower than that estimated by male respondents. Funding is a measure of how respondents feel investors would perceive the startup/founders. This means female respondents feel that investors would also not value 31,32 year old female founders, as opposed to male respondents. The estimate of female respondents for a startup founded by 21,22 year old females is higher than that of a startup founded by 31,32 year old females.

Male respondents felt that the probability of funding for a startup founded by young females was higher than that founded by older males. Surprisingly males also felt the probability of funding for a startup founded by 32,33 year old female founders was higher than that of a startup founded by 32,33 year old males. Their estimate for funding probability for older males was lower than that of 32,33 year old female founders also. On the contrary, female respondents felt that the probability of 42,43 year old males getting funded for their startup was higher than that of a startup founded by 32,33 year old females.

22,23 year old males were more likely to abandon their startup than 42,43 year old females. Males estimated that 32,33 year old females were more likely to abandon their startup as compared to 42,43 year old female founders who were also less likely than 22,23 year old males to abandon theirs. Surprisingly male respondents felt that 32,33 year old males were more likely than 32,33 year old females to abandon their startup.

#### 4.1 Older

We see a clear difference between the estimated probability of success for startups driven by young female founders versus those driven by old female founders. The difference is driven more by female respondents. We also see that there is no statistically significant difference in the estimated probability of abandoning the startup between older males and female founders. There is a difference in the estimated probability of abandoning the startup in case of young male founders. This is also driven by female respondents.

- 1. Female founders= Education plays a role more, than in the case of males. This is also driven by female respondents. This means if a product is targeted towards
- 2. Abandoning is not a problem in the case of females, as was being expected earlier. Good signal, social change.
- 3. Abandoning by young males was considered a risk, especially by female respondents. This means a B2C product focused on women, sold by a startup founded by young males, is less likely to work if it involves a longevity assumption on the part of the customer. Similarly in case of a B2B product, if the person on the buyer's side is a female, the startup founders should invest in signalling longevity, stability and their intent to stay along with a plan to sustain.

We see that while there is no difference in the perception of success, funding or abandonment of a startup based on whether the founders are CASE 1 or CASE 2, we see that the perception of males and females varies. A practical import of this would be \* If the product is targeted towards females, Vs males \* If the investor who is evaluating the startup for funding is a male Vs Female \* (IN case of abandon), then the founders should spend time showing commitment \* This could explain some difference between the funding obtained by women

#### 5 Limitations

- Situation is dynamic
- Investors might be more sophisticated and not be biased though extant research has shown otherwise  $^4\,$

#### \section{Limitations}

We do not analyse the results based on the background of the respondents. We take only a We do not look at Foreign education.

We do not specify the role in government service. It is possible that a bureaucrat is re

# 6 ToDO

- Correct Labels
- Write as per plan of View followed by Gender

<sup>&</sup>lt;sup>4</sup>ADD Literature

• Write a separate one on familiarity.

# References

Dr Preet Deep Singh. Perception of founders' education and gender in startups. Available at  $SSRN\ 3916424,\ 2021a.$ 

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