

Interest and Intention

ENTREPRENEURSHIP IN ENGINEERING ALUMNI

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Motivation

WHY?

- America's economic growth and competitiveness depend on its **ability to innovate**, particularly in the technical fields
- **Entrepreneurship** is an important pathway to innovation and leadership

WHAT IS MISSING?

- The exploration of what factors influence whether or not **engineering graduates will engage in entrepreneurial activities**

Goals

ABOUT THIS STUDY

- We explored how engineering alumni who are **interested** in starting a business may be **similar to or different** from their peers

- Used a **logistic regression** to determine what variables were the most important in **predicting a student's intention and interest** in pursuing entrepreneurial activities

- Examined why engineering alumni who co-founded or started a company in the past may **no longer have an entrepreneurial interest**

Research Questions

1. How do engineering alumni with high intention and high interest in pursuing entrepreneurial activities **compare** with peers with low entrepreneurial intention and interest in terms of **demographics, career-related characteristics, self-confidence and interest in technical concepts and problems**?
2. What **factors influence** alumni's interest in and intention to pursue entrepreneurial activities?
3. For engineering alumni who have been **entrepreneurs in the past, what activities led them to become either more entrepreneurially minded or divert** to a non-entrepreneurial career path?

Dataset

THE PATHWAY OF ENGINEERING ALUMNI RESEARCH SURVEY [PEARS]

- PEARS expanded upon prior work from Academic Pathways of People Learning Engineering Survey [APPLES]
- 484 alumni (2007)
- Four different universities in the United States

<u>Sex</u>	
Female	113 [23.4%]
Male	371 [76.6%]

<u>Current Position</u>	
Engineering	366 [76.2%]
Non-Eng	114 [23.8%]

<u>Co-founded</u>	
Co-founded	38 [7.8%]
Non co-found	447 [92.2%]

<u>Race</u>	
URM	29 [6.2%]
Non-URM	430 [93.8%]

<u>Family Income</u>	
Low	24 [4.8%]
Low-middle	85 [17.7%]
Middle	192 [39.7%]
Upper-middle	158 [32.8%]
High	24 [5.0%]

Intention **AND** Interest will result in Entrepreneurial Action

INTENTIONS

Entrepreneurship: is when individuals
identify opportunities



Following opportunities is an **intentional
act**



Strong intentions result in **acting upon
those intentions**

INTEREST

Alumni who have shown high interest are
more likely to pursue entrepreneurship



Therefore, interest can be used to predict
future entrepreneurial action

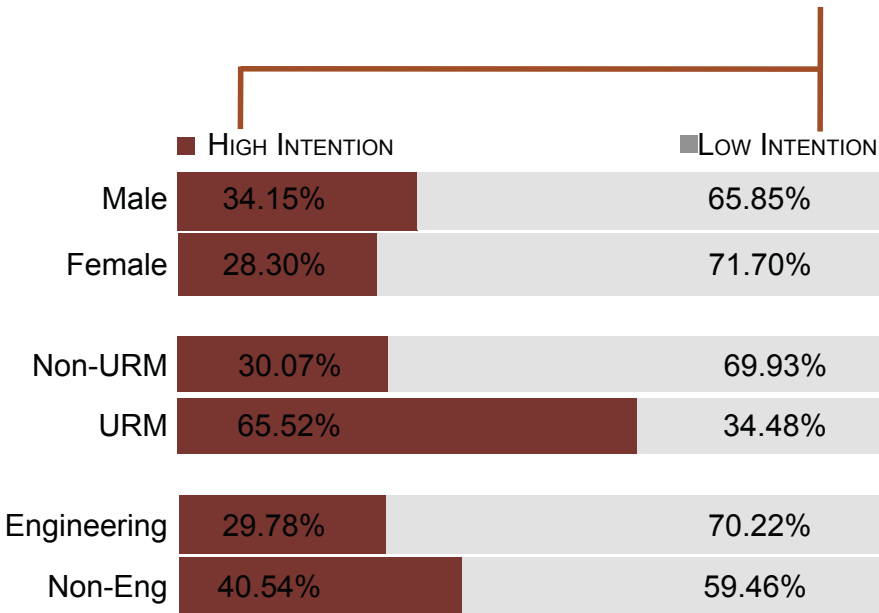
Mapping of Intention and Interest Responses

HIGH – LOW INTENTION AND INTEREST GROUPS

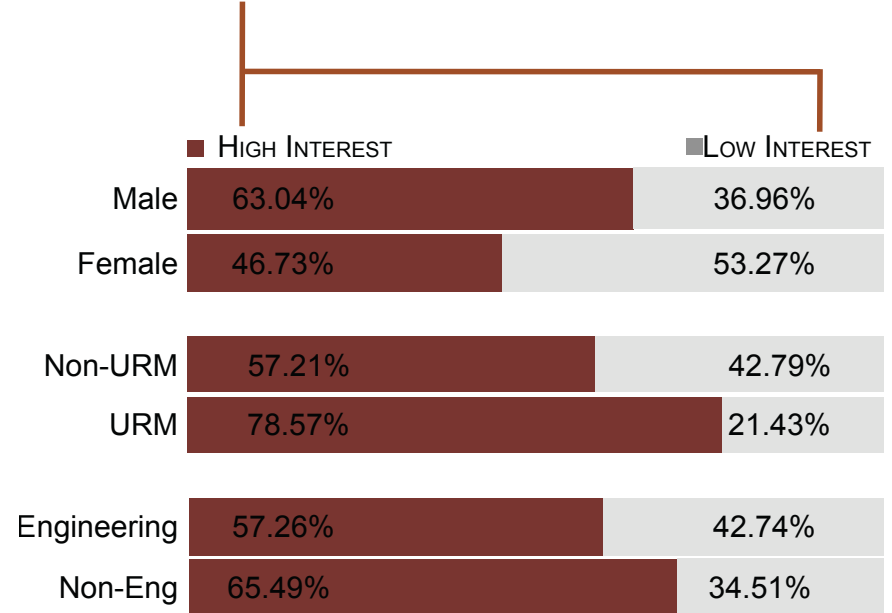
Question	Response	Level of Intention or Interest
<i>How likely is that you will start a company or an organization in the near future?</i>	Definitely Not Probably Not	Low Intention Low Intention
	Maybe Probably Yes Definitely Yes	High Intention High Intention High Intention
<i>Are you interested in being an entrepreneur?</i>	Not Interested Slightly Interested	Low Interest Low Interest
	Moderately Interested Very Interested	High Interest High Interest
	Extremely Interested	High Interest

RQ1 Demographics

INTENTIONS



INTEREST



RQ1

CAREER-RELATED CHARACTERISTICS

For low intention group
A secure job is more important

For the high intention group
A job that is a stepping stone

Both groups equally valued
Having a well-paying job
and a job that is intellectually
interesting

CONFIDENCE IN PROFESSIONAL WORK SETTING

For low intention group
Reported greater interest in
working on engineering concepts

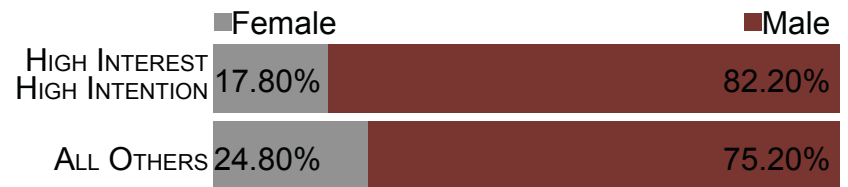
For the high intention group
Alumni were more confident about
leading people

RQ2

FACTORS THAT INFLUENCE ENTREPRENEURIAL ACTIVITIES

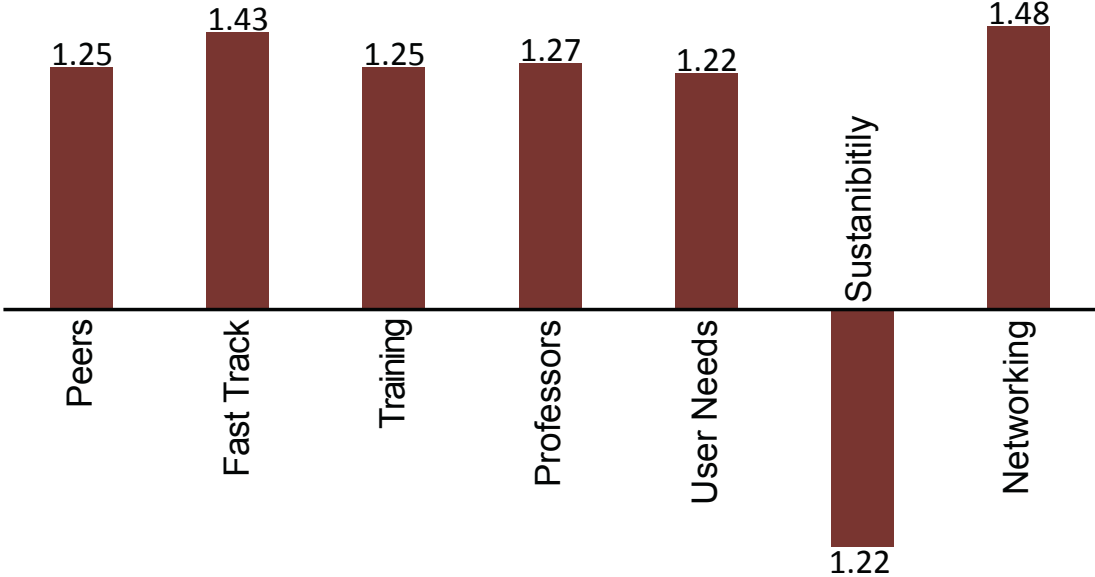
Women represented almost one fourth (23.3%) of surveyed, and one fifth (17.8%) of the high interest–high intention group

Significant associations with gender, underrepresented minorities (URM), and engineering alumni who currently hold an engineering position.



RQ2 Regression Model

PREDICTING LIKELIHOOD
OF HIGH INTEREST-
HIGH INTENTION IN
ENTREPRENEURSHIP



RQ3

Classification of Alumni

ENTREPRENEUR AND NOT AN ENTREPRENEUR CLASSIFICATIONS

<u>Question</u>	<u>Response</u>	<u>Entrepreneur Classification</u>
<i>In your career path so far, have you started or co-founded your own company?</i>	Yes	Past Entrepreneurs
	No	Not Past Entrepreneur
<i>How likely is it that you will start a company or an organization in the near future?</i>	Definitely Not	Not Past Entrepreneur
	Probably Not	
	Maybe Probably Yes Definitely No	Past and Future Entrepreneurs

RQ3

DEMOGRAPHICS AND RESULTS

Past Entrepreneurs with NO interest in pursuing entrepreneurship again had significantly higher mean scores in having a well-paying job and having a job.

Future Entrepreneurs had significantly higher mean in leading a team of people and resolving conflicts with team members

Conclusions

AND DISCUSSION

Prior research largely focused only on either entrepreneurial interest or entrepreneurial intention. **This research examined both.**

RQ1: Both the high intention and high interest groups had a higher representation of **URM**, and **women were** more likely than men to be represented in the low intention and low interest groups.

RQ2: logistic regression model found that alumni's characteristics in regard to **financial security, career advancement, social good, work life balance and external motivations** were significant predictors of entrepreneurship activity.

RQ3: **all women** with prior entrepreneurship experience expressed interest in and intention to continue on the entrepreneurial path; this was similarly the case for **URM**. The Past and Future Entrepreneurs group placed lower importance on **having a well-paying job.**

Thank you

QUESTIONS

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