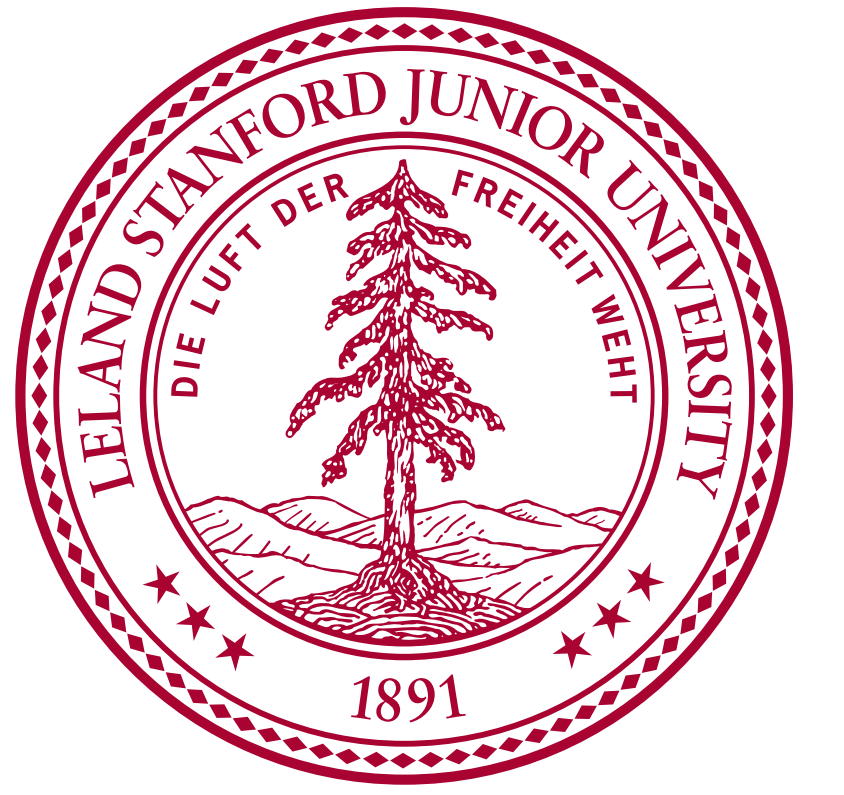


INTEREST AND INTENTION ENTREPRENEURSHIP IN ENGINEERING ALUMNI

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INTRODUCTION

America's economic growth depends on its ability to innovate. Entrepreneurship is an important pathway to innovation and leadership.

Our goal: To explore what factors influence whether or not **engineering graduates will engage in entrepreneurial activities** and how engineering alumni who are interested in starting a business may be similar to or different from their peers.

Logistic regression created to predict a student's intention and interest in pursuing entrepreneurial activities. We also explored engineering alumni who **co-founded or started a company in the past but may no longer have entrepreneurial interest.**

DATASET

THE PATHWAY OF
ENGINEERING ALUMNI
RESEARCH SURVEY
[PEARS]

- Expanded from Academic Pathways of People Learning Engineering Survey [APPLES]

- 484 alumni (2007) and four different universities

SEX	POSITION	FAMILY INCOME
Female 23.4%	Engineering 76.2%	Low 4.8%
Male 76.6%	Non-Eng 23.8%	L-Middle 17.7%
		Middle 39.7%
RACE	ENTREPRENEURIAL	
URM 6.2%	Co-founded 76.2%	Upper 39.7%
Non-URM 93.8%	Non co-found 23.8%	High 5.0%

RESEARCH QUESTIONS

How do engineering alumni with high intentions and high interest in pursuing entrepreneurial activities compare with peers?

What factors influence alumni's interest in and intention to pursue entrepreneurial activities?

For engineering alumni who have been entrepreneurs in the past, what activities led them to either become more entrepreneurial minded or divert to a non-entrepreneurial career path?

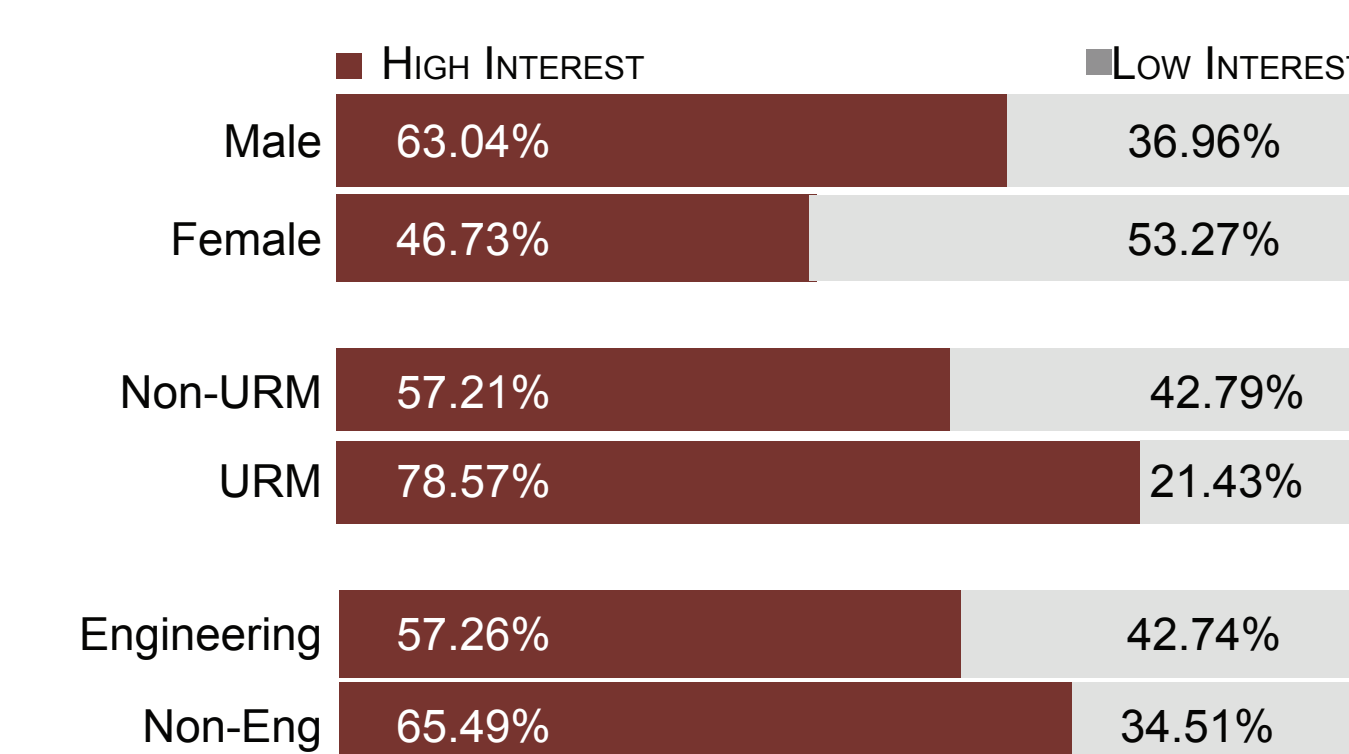
INTEREST AND INTENTION

INTEREST Entrepreneurship: is when individuals identify opportunities \Rightarrow Following opportunities is an intentional act and Strong intentions result in action

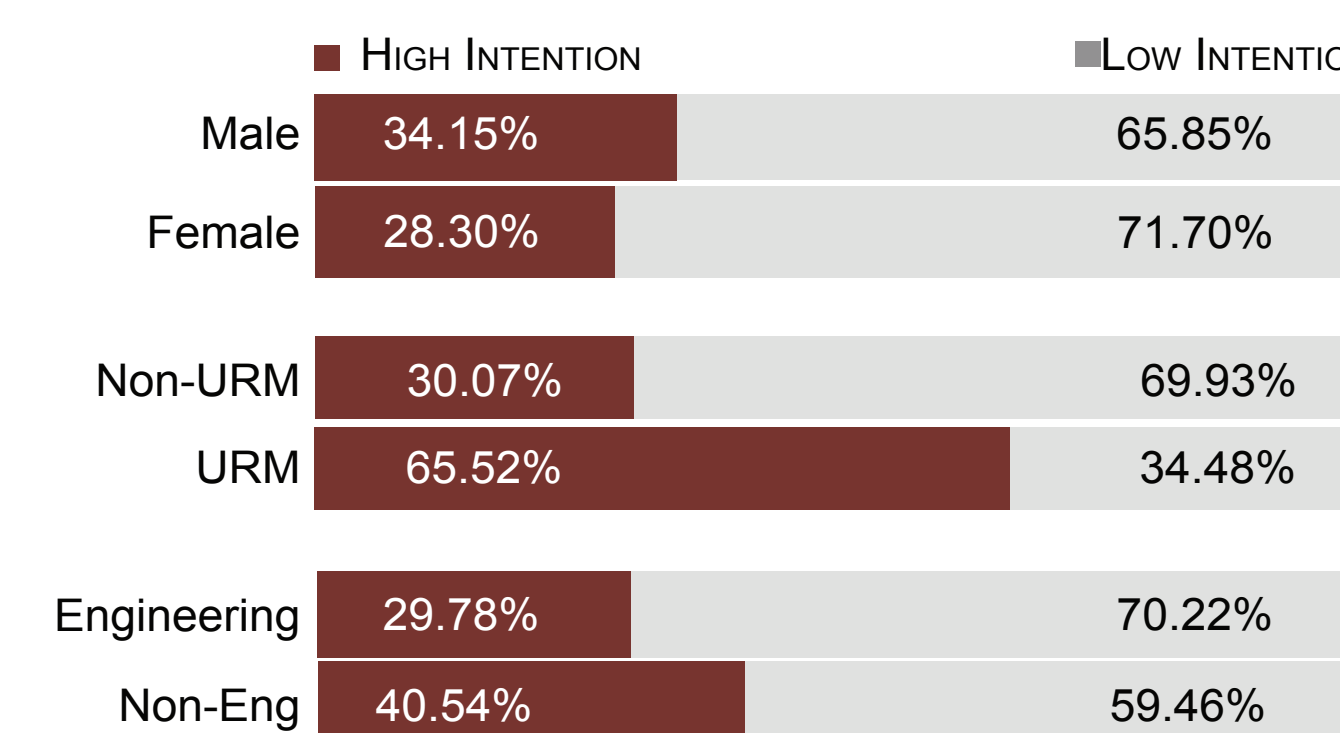
INTENTION Alumni who have shown high interest are more likely to pursue entrepreneurship \Rightarrow Therefore, interest can be used to predict future entrepreneurial action

RESULTS

INTEREST



INTENTION



CAREER RELATED CHARACTERISTICS

Low intention group: A secure job is more important

High intention group: A job that is a stepping stone

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

CONFIDENCE IN PROFESSIONAL WORK SETTING

Low intention group: are more interested in working on engineering concepts

High intention group: more confident about leading people

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

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

Predictor Variable	B	SE	p-value ¹	Odds ratio	Ratio	
					Lower	Upper
What my peers are doing	0.23	0.10	<.01**	1.26	1.04	1.52
Experiences in my job	0.12	0.11	0.29	1.12	0.90	1.40
Having a secure job	-0.54	0.13	<.001***	0.59	0.45	0.76
Fast track/career path	0.33	0.12	<.001***	1.40	1.11	1.76
Additional education	0.21	0.11	<.05*	1.24	0.99	1.54
Skills from classes	0.24	0.12	<.05*	1.27	1.00	1.61
Did an intern or coop	-0.73	0.27	<.001***	0.48	0.29	0.81
Engineering techniques	-0.30	0.10	<.001***	0.74	0.61	0.90
Considering cost	0.22	0.10	<.01**	1.25	1.02	1.53
Considering sustainability	-0.23	0.11	<.01**	0.79	0.64	0.98
Considering user needs	0.20	0.11	<.05*	1.22	0.99	1.51
Lack of support at work	0.38	0.11	<.001***	1.46	1.18	1.80
Lead a team	0.34	0.14	<.001***	1.40	1.07	1.83
Career Satisfaction	-0.15	0.12	<.01**	0.86	0.68	1.09
Current standard living	-0.22	0.17	0.08	0.80	0.57	1.11
Citizenship Status	0.28	0.22	0.19	1.32	0.87	2.01

Predicting likelihood of high interest-high intention in entrepreneurship

FACTORS	ENTREPRENEURS	
	PAST	PAST AND FUTURE
Female	0%	9.1%
Male	100%	90.9%
URM	0%	16.4%
Non-URM	100.0%	83.6%
Engineering	61.8%	61.6%
Non-Eng	38.2%	38.4%

CONCLUSIONS

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

RQ2: It was found from the **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: **Women** with prior entrepreneurship experience **expressed interest in and intention to continue on the entrepreneurial path; also the case for URM.** Past and Future Entrepreneurs placed lower importance on having a well-paying job.

ACKNOWLEDGMENTS

Janna Rodriguez's work was supported from by Ford Foundation Fellowship. We wish to thank Dr. Mark Schar and Dr. Shannon Gilmartin, and the support of the Designing Education Lab at Stanford University. Research grant (NSF-DUE-1020678, 1021893, 1022024, 1022090, and 1022644).

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