

# Understanding Women's Participation in Pre-Entrepreneurial Activities: Evidence from a Blackstone LaunchPad 

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## Table of Contents

I. Summary ..... 3
II. Background and Hypotheses ..... 4
III. Methods and data ..... 7
IV. Results ..... 8
A. Presence and pursuit of idea ..... 8
B. Perceptions of costs and benefits of entrepreneurship ..... 9
C. Who is more likely to indicate interest in entrepreneurship? ..... 12

1. People who know entrepreneurs are more likely to indicate willingness to consider entrepreneurship ..... 12
2. People who pursued prior ideas are more likely to indicate willingness to consider entrepreneurship ..... 13
3. Women who believe that entrepreneurs enjoy benefits are more likely to indicate willingness to consider entrepreneurship ..... 15
D. Awareness and utilization of pre-entrepreneur resources ..... 15
V. Conclusion ..... 16

## I. Summary

Women are less likely to become entrepreneurs. The disparities in entrepreneurial propensity between men and women appear at the earliest stages of the entrepreneurial process. However, most of the existing literature on women entrepreneurs examines individuals who have launched a business or are actively working toward launching a business. To increase women's participation in entrepreneurial activity, it is important to understand and address women's lower participation at the earliest stages.

This paper describes and begins to explain gender disparities in early stage, or pre-entrepreneurial, activities among university students and alumni. We show that women in a university community are less likely to engage a low-stakes resource for nascent entrepreneurs, the Blackstone BLP. We show that women are less likely to report having an idea for a new venture, less likely to report that they would spend even a few hours pursuing a new idea if they had one, and less likely to believe that they will be an entrepreneur at some point in their life.

Our results indicate that women and men view entrepreneurship differently. While women and men hold similar views about the costs and benefits of entrepreneurship, women are slightly more likely to believe that entrepreneurs work more hours and are somewhat less likely to believe that they earn more than non-entrepreneurs. Women are also more likely to cite potential time costs, emotional risks, lack of know how, and lack of skills as reasons why they would not pursue a new idea.

Moreover, the relationship between perceptions of the benefits of entrepreneurship and propensity to indicate willingness to engage in entrepreneurship are much stronger among women. Women who indicate that they believe that entrepreneurs enjoy benefits like higher earnings, more community respect, and more flexible schedules are 8-20 percentage points more likely to indicate a willingness to pursue entrepreneurial activities. For men, these relationships are smaller and not statistically significant.

These results beg the questions, "why do women have different perceptions of the costs and benefits of entrepreneurship and what, if anything, might be done to change these perceptions and increase women's willingness to engage in entrepreneurship?" Our survey suggests some crude answers to these questions. People who know at least one entrepreneur are 16-26 percentage points more willing to pursue entrepreneurial activities. People who know a female entrepreneur - both men and women - indicate an even higher (20-32 percentage points) willingness to pursue entrepreneurial activity. Thus exposure to other entrepreneurs seems to have some effect on willingness to engage in entrepreneurial activity.

Similarly, past participation in entrepreneurial activity, even only very early stage pre-entrepreneurial activity, is strongly associated with reported willingness to engage in future entrepreneurial activity. For instance, people who simply report that they had an idea that they thought about a little are 9-18 percentage points more likely to indicate willingness to pursue entrepreneurial activity. Not surprisingly, people who pursued an idea further are even more likely to indicate a willingness to pursue future ideas. Individuals who pursued a previous idea
through doing some research and/or talking to people about the idea are 32-43 percentage points more likely to indicate a willingness to pursue entrepreneurship.

While these results show correlation and not causation, they suggest that exposure to and participation in even very early stage entrepreneurial activities may prompt greater willingness to engage in future pre-entrepreneurial activities. Preliminary efforts to increase women's participation in pre-entrepreneurial activities within this university community built around these ideas have yielded some encouraging results; however, additional research is required to adequately explain women's lower propensity for pre-entrepreneurial activity and to identify methods to increase it.

## II. Background and Hypotheses

In 2014, the University of Montana (UM) and Montana State University (MSU) opened Blackstone LaunchPads (BLP). The BLPs help students, alumni, faculty and staff turn their ideas, skill and passions into real world businesses and non-profit organizations. There are no criteria other than being affiliated with either University to gain access to the BLP. The BLP will help individuals explore any entrepreneurial idea and provides free consulting and resources to help them progress.

In spite of comprising more than 50 percent of students and in spite of the low cost of exploring an idea with BLP staff, women have been less likely to use the BLP resources at UM and MSU. Over the program's first 18 months, women comprised just 28 percent of the 519 students who registered with the BLPs at UM and MSU (and women comprise only 31 percent of the 770 students, alumni, faculty, and staff who registered). ${ }^{1}$ Similarly, between 2006 and 2015, women comprised only 39 percent of participants at the University of Montana's business plan competition.

Women's lower propensity to engage the BLP and participate in the business plan competition mirrors women's lower rates of entrepreneurship. For instance, according to American Community Survey data, women comprise only 35 percent of self-employed workers. Similarly, data from the Survey of Business Owners show that less than 30 percent of private businesses and less than 20 percent of privatelyheld employer firms are majority women owned.

The research literature on female entrepreneurs identifies several reasons why women engage in entrepreneurial activity at lower rates. ${ }^{2}$ These reasons include:

[^0](1) Women face different time pressures/domestic responsibilities than men, and this impedes their ability to commit long hours to start-ups;
(2) Women's human and social capital is less conducive to entrepreneurial activity (e.g., women's work experience, education, skills, role models, social networks, etc. are not well suited to support a start-up);
(3) Women are more risk averse and/or have less confidence in their entrepreneurial skills;
(4) Women face discrimination, unfavorable social norms, an unfriendly culture, etc., and these barriers make launching a viable start-up more difficult.

While the existing literature investigating women's lower rates of entrepreneurship helps explain some of the factors that deter or derail women entrepreneurs, it fails to adequately explain women's lower propensity to engage in low-stakes, pre-entrepreneurial activities, like engaging the BLP. There are essentially no barriers to engaging the BLP. If someone has an idea that they are interested in exploring, they can register and explore their idea with BLP staff. Discussing an idea with BLP staff does not entail much risk or time, and does not require funding or access to extensive networks.

The fact that women are much less likely to engage the BLP suggests that some of the barriers to female entrepreneurship occur at the earliest stages of the start-up process. Much of the existing literature on women entrepreneurs focuses on people who launch a business (and thus became the business owners or self-employed workers examined in the literature). As such, we have little information about the barriers faced by a potentially large set of people - those who started the preentrepreneurial process but did not complete it. To identify and remove barriers for women entrepreneurs we want to learn more from the full set of pre-entrepreneurs.

We divide the pre-entrepreneurial process into five stages (see Figure 1): idea, evaluation, dabbling, doing, and launch. First, at the idea stage, the potential entrepreneur has an idea and/or thinks about becoming an entrepreneur. Second, during the evaluation stage, the potential entrepreneur looks to data, social networks, role models, stereotypes, etc. to answer two questions: "is my idea any good?" and "could I actually succeed as an entrepreneur?" Third, those who think they may have a viable idea and sufficient skill begin to dabble. That is, they to start to figure out what they should do to launch a venture. This includes, but is not limited to, engaging resources like the BLP (if one is available to you). Fourth, the potential entrepreneur starts doing - assembling the resources to create a viable product, creating a legal entity, etc. Finally, if one makes it through these various stages, the venture launches. At each stage, some potential entrepreneurs drop out, so only a small fraction of potential entrepreneurs make it through the whole process.

The fact that women are less likely to engage the BLP suggests that women encounter barriers early on - in the idea, evaluation, or dabbling phases. These phases are primarily focused on figuring out whether pursuing one's idea is likely to be "worth it." That is, they are about identifying potential outcomes (both benefits
and costs), the probabilities associated with those outcomes, and one's feelings about the potential outcomes.

Figure 1: Stages of Pre-Entrepreneurship


We have several hypotheses for why women may be less likely to proceed through these stages. Fewer women may make it through the idea phase because:
(1) Women have ideas that could become a viable enterprise, but they fail to recognize the opportunity;
(2) Women have fewer ideas for ventures.

Women who recognize that they have an idea or opportunity may be less likely to make it through the evaluation stage than a man because, at the margin:
(3) Women's initial perceptions of the expected costs of becoming an entrepreneur are higher than men's. That is, women expect to encounter larger barriers with a higher probability.
(4) Women's initial perceptions of the expected benefits of becoming an entrepreneur are lower than men's. That is, women believe that the joys of entrepreneurial success are lower, the pain of failure is higher, and/or their probability of success is lower then men.

Women may expect higher costs or lower benefits for a variety of reasons. Higher expected costs among women may reflect some of the factors outlined in the existing literature on barriers to women's entrepreneurship. For instance, women may fear they will not be able to access adequate resources to develop the idea, they may expect to have insufficient time due to future family concerns, or they may think Understanding Women's Participation in Pre-Entrepreneurial Activities: Evidence from a Blackstone LaunchPad
they lack management or other important skills. Women's lower expected benefits may stem from insufficient positive feedback from their social networks or from society, different perceived benefits from being an entrepreneur, or greater risk aversion. Both higher costs and lower benefits may reflect the lack sufficient role models to make becoming an entrepreneur seem possible.

Finally, women who make it through the evaluation stage may be less likely to engage in dabbling because:
(5) The resources available to support dabbling (e.g., the Blackstone LaunchPad) are not appropriately marketed or made available to women.

This project seeks understand women's engagement in pre-entrepreneurial activities and to investigate several hypotheses for why women are less likely to complete the earliest stages of the pre-entrepreneurial process.

## III. Methods and data

We developed and implemented an online survey of students at the University of Montana in the spring of 2016. This survey yielded over 700 respondents. Table 1 describes the composition of the sample relative to the university population. The sample contains a similar proportion of females and people age 24 and under as the overall university population. However, the allocation across subject areas is skewed. In particular, our sample contains many more business than the overall population. This may reflect some differences in how the survey was marketed or it may reflect that students interested in entrepreneurship were more likely to selfselect into a survey about entrepreneurs.
Table 1: Sample characteristics relative to university population

|  | Sample | University <br> population |
| ---: | :---: | :---: |
| \% female | $57 \%$ | $54 \%$ |
| \% undergraduate | $78 \%$ | $83 \%$ |
| \% undergrad <25 years old | $74 \%$ | $75 \%$ |
| Business | $29 \%$ | $15 \%$ |
| STEM | $13 \%$ | $16 \%$ |
| Social Sciences | $10 \%$ | $15 \%$ |
| Humanities | $9 \%$ | $13 \%$ |
| Education | $5 \%$ | $7 \%$ |
| Health | $12 \%$ | $19 \%$ |
| Journalism/Communications | $5 \%$ | $5 \%$ |
| Other | $11 \%$ | $10 \%$ |

Understanding Women's Participation in Pre-Entrepreneurial Activities: Evidence from a Blackstone LaunchPad

## IV. Results

## A. Presence and pursuit of idea

The data from Montana's BLPs suggests that women are less likely to reach the dabbling phase. Our survey data confirm this finding. The survey results show that women are less likely to engage in various pre-entrepreneurial activities and not simply less likely to engage the BLP.

We describe our results in Tables 2-8 below. In most of these tables we present the raw percent of respondents who fall into the categories examined. We also present the percentage point difference between men and women as well as the ratio. The percentage point difference describes the difference in the share of respondents in each group. The ratio helps describe the change in the probability of falling in a particular group.

For instance, the first two rows in Table 2 look backward. The first row shows that men are more likely than women to indicate that they previously had an idea that they thought would make a successful business or non-profit. Seventy-seven percent of men report having had an idea, but only $64 \%$ of women report having had an idea. Thus women are 13 percentage points less likely to report that they had an idea. Taking the ratio, this means that men are 20 percent more likely to report a past idea.

The second row in Table 2 shows that women in our sample were also less likely to have seen an idea through to launch. Eight percent of women reported launching a venture compared to $14 \%$ of men. This means that women are 6 percentage points less likely to have launched a venture. This could also be interpreted that men are $75 \%$ more likely have launched a venture.
Table 2: Past participation and future interest in entrepreneurial activity

|  | Women | Men | Difference <br> (W-M) | Ratio <br> (M/F) |
| :--- | :---: | :---: | :---: | :---: |
| Have you had an idea that you <br> thought would make a successful <br> business or non-profit? | $64 \%$ | $77 \%$ | $-13 \%$ | 1.20 |
| Did you pursue prior idea through <br> launch? | $8 \%$ | $14 \%$ | $-6 \%$ | 1.75 |
| If you had an idea for a business or <br> non-profit, do you think you would <br> pursue it (i.e., spend more than a few <br> hours thinking about it)? | $68 \%$ | $84 \%$ | $-16 \%$ | 1.24 |
| Would you be likely or very likely <br> pursue potential idea through <br> launch? | $28 \%$ | $46 \%$ | $-18 \%$ | 1.64 |
| Are you likely or very likely to start a <br> business or non-profit at some point <br> in life | $29 \%$ | $45 \%$ | $-16 \%$ | 1.55 |

The last three rows in Table 2 look forward. The third row posits that the respondent would have an idea and asks how likely they would be to pursue it (where pursue simply meant spend more than a few hours thinking about it). $84 \%$ of men report that they would pursue a new idea, but only $68 \%$ of women indicated they would. Thus male respondents were 16 percentage points (or $24 \%$ ) more likely to indicate that they would spend a few hours thinking about a new idea.

In addition, only $28 \%$ of women indicated that they would be likely or very likely to pursue a new idea all the way through launch (in contrast $48 \%$ of men think it likely or very likely they would pursue an idea through launch). Consistent with this, $29 \%$ of women and $45 \%$ of men believe it likely that they will launch a venture at some point in their lives.

These findings indicate that women are dropping out at the earliest stages of the pre-entrepreneurial process. They are less likely to report having had an idea (or at least having recognized an idea) and, assuming that they might have an idea, they indicate that they would be less likely to pursue it at all and less likely to pursue it through launch.

## B. Perceptions of costs and benefits of entrepreneurship

The next question is, "why?" Why are women less likely to indicate interest in pursuing ideas for potential new ventures? To begin to answer this question, we asked survey respondents a variety of questions about their perceptions of the potential costs and benefits of entrepreneurship. We also asked people who indicated that they were unlikely to engage in pre-entrepreneurship, why they would be unlikely to do so.

Overall, men and women offered similar answers to these questions. For instance, both men and women tend to agree that entrepreneurs face challenges that may not be offset by rewards. Clear majorities of both men and women agree that entrepreneurs face financial risks, work long hours, and sacrifice other interests, but only minorities of men and women agree that entrepreneurs are more respected, enjoy greater flexibility in their everyday lives, or earn more money.

Table 3: Gender differences in perceptions of costs and benefits of entrepreneurship

|  | Female | Male | Diff. <br> (F-M) | Ratio <br> (M/F) |
| :--- | :---: | :---: | :---: | :---: |
| Entrepreneurs take financial risks like <br> borrowing money, go into debt, spend <br> their savings, etc. | $84 \%$ | $90 \%$ | $-6 \%$ | 1.07 |
| Entrepreneurs work substantially longer <br> hours than other workers | $85 \%$ | $81 \%$ | $4 \%$ | 0.95 |
| Entrepreneurs have less time for other <br> activities in their personal lives (e.g., <br> friends, families, hobbies) | $60 \%$ | $61 \%$ | $-1 \%$ | 1.02 |
| Entrepreneurs are highly respected in <br> their communities | $52 \%$ | $50 \%$ | $2 \%$ | 0.96 |
| Entrepreneurs have more flexibility in <br> their everyday lives than other workers | $46 \%$ | $49 \%$ | $-3 \%$ | 1.07 |
| Entrepreneurs earn more money than <br> other workers | $20 \%$ | $35 \%$ | $-15 \%$ | 1.75 |

Similarly, among those who indicated it was unlikely that they would pursue a hypothetical idea through launch, men and women tended to agree on the most likely barriers to their pursuit of an idea. Concerns about financial risk and the opportunity cost of the time and energy required were the most common responses. However, majorities of both men and women also expressed concerns about obtaining the money to start something, figuring out how to start, etc. Clear majorities of both men and women who did not indicate that they would pursue a new idea through launch also believe that they would earn more and be happier pursuing a standard career.

Table 4: Barriers to pursuing idea among those who said that they would not pursue an idea or that they would be unlikely to pursue it through launch

|  | Female | Male | Difference <br> (F-M) | Ratio <br> (F/M) |
| :--- | :---: | :---: | :---: | :---: |
| Starting a venture will require too much <br> time and energy and conflict with other life <br> goals | $80 \%$ | $74 \%$ | $6 \%$ | 1.08 |
| Starting a venture is too financially risky | $78 \%$ | $80 \%$ | $-2 \%$ | 0.98 |
| I do not have and do not know how to get <br> the money required | $71 \%$ | $70 \%$ | $1 \%$ | 1.01 |
| Starting a venture is too emotionally risky | $68 \%$ | $52 \%$ | $16 \%$ | 1.31 |
| I don't know how to go about it | $70 \%$ | $62 \%$ | $8 \%$ | 1.13 |
| I will likely earn more money pursuing a <br> standard career | $57 \%$ | $62 \%$ | $-5 \%$ | 0.92 |
| I will likely be happier pursuing a standard <br> career | $60 \%$ | $58 \%$ | $2 \%$ | 1.03 |
| I lack the ability or skills needed to develop <br> a product or service | $61 \%$ | $55 \%$ | $6 \%$ | 1.11 |
| I lack the skills to hire/manage the people I <br> would need | $40 \%$ | $42 \%$ | $-2 \%$ | 0.95 |

While men and women have similar views of entrepreneurs and similar reasons for indicating that they would be unlikely to engage in pre-entrepreneurial activities, there are some differences. For instance, men are much more likely to indicate that becoming an entrepreneur is an important life goal. One-third of men indicate that starting a venture is important to achieve their best possible life, but less than 1 in 5 women agree that starting a venture is important to achieve their best possible life. Women are also less likely to believe that entrepreneurs earn more money. Only 1 in 5 women also believe that entrepreneurs earn more than nonentrepreneurs. This is 15 percentage points below the share of men who believe that entrepreneurs earn more money. Women are also more likely than men to cite potential time costs, emotional risks, lack of know how, and lack of skills as reasons why they wouldn't pursue a new idea.

Thus, while men and women have similar views regarding the costs and benefits of engaging in entrepreneurship, their views are not identical. Different perspectives on entrepreneurship may help explain why women are less likely to engage in pre-entrepreneurial activities.

## C. Who is more likely to indicate interest in entrepreneurship?

The results described above show that women are less likely than men to indicate an interest in engaging in entrepreneurial activity. The results also show that gender disparities in the perception of entrepreneurship might help explain these differences. But where do these differences in perception come from and what might be done to change them and increase women's willingness to consider entrepreneurship?

While these are deeper questions than we can answer in this study, we take a preliminary step by examining which women (or men) are more likely to indicate an interest in entrepreneurial activities. That is, we describe the characteristics or beliefs that correlate with interest in entrepreneurial activities. While the results we discuss are just correlations, they may help illuminate areas that practitioners may focus on in efforts to boost female participation.

In general, the probability that a respondent indicates that they would be likely to spend at least a few hours pursuing a new idea or that they will likely start a business or non-profit at some point is uncorrelated with basic demographic characteristics like age, race, degree, or field of study. There are a few exceptions though. STEM majors and education majors are less likely to indicate that they would spend at least a few hours pursuing a new idea, and older respondents and business majors are more likely to believe that they will start a business or nonprofit at some point in their lives.

Two other background characteristics are more strongly associated with willingness to consider entrepreneurship: personally knowing an entrepreneur (particularly a female entrepreneur) and having recognized (and pursued) an idea for a business or non-profit. We discuss each of these in more detail below.

## 1. People who know entrepreneurs are more likely to indicate willingness to consider entrepreneurship

The people in your social network provide a potentially important source of information about entrepreneurs. As part of the survey, we asked questions about whether people knew an entrepreneur, whether they know a female entrepreneur, and how they were related to entrepreneurs they knew. Most people know at least one entrepreneur ( $83 \%$ of men and $84 \%$ of women). Most women know a female entrepreneur ( $76 \%$ ) as do most men ( $54 \%$ ). Slightly more than $25 \%$ of both men and women had a parent who had started a business or non-profit, and slightly more than $40 \%$ of both men and women knew a family member who had started a business or non-profit.

People who indicated that they knew an entrepreneur are more likely to indicate that they would pursue an idea if they had one and are more likely to believe it likely that they will be an entrepreneur at some point in their life. Seventy percent of women who know at least one entrepreneur indicate that they would pursue an idea if they had one, but only 54 percent of women who do not know an entrepreneur

## PRELIMINARY DRAFT

would. Similarly, 33 percent of women who know an entrepreneur think it likely that they would become an entrepreneur at some point, but only 12 percent of women who do not know an entrepreneur believe they will likely become one. The gaps for men are larger. Men who know an entrepreneur are 22 percentage points more likely to indicate that they would pursue and idea and 28 percentage points more likely to believe it likely that they will become an entrepreneur.

Knowing a female entrepreneur is associated with even greater willingness to engage in entrepreneurial activity for both women and men. Relative to women who know zero entrepreneurs, women who know at least one female entrepreneur are 20 percentage points more likely to pursue a new idea and 24 percentage points more likely believe it likely that they will be an entrepreneur at some point. Interestingly, a similar pattern applies to men. This suggests that men also may benefit from exposure to female entrepreneurs.

Table 6: Relationship between personally knowing an entrepreneur and willingness to pursue idea or likelihood of ever becoming an entrepreneur

|  | Women |  | Men |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Percent <br> likely to <br> purse an <br> idea | Percent likely to <br> become an <br> entrepreneur at <br> some point | Percent <br> likely to <br> purse an <br> idea | Percent likely to <br> become an <br> entrepreneur at <br> some point |
| Know zero <br> entrepreneurs | $54 \%$ | $12 \%$ | $66 \%$ | $22 \%$ |
| Know at least <br> one <br> entrepreneur | $70 \%$ | $33 \%$ | $87 \%$ | $50 \%$ |
| Only male <br> entrepreneurs | $59 \%$ | $21 \%$ | $82 \%$ | $44 \%$ |
| At least 1 female <br> entrepreneur | $74 \%$ | $36 \%$ | $92 \%$ | $54 \%$ |

## 2. People who pursued prior ideas are more likely to indicate willingness to consider entrepreneurship

People who did not indicate that they had had an idea for a potential venture in the past were much less likely to indicate that they would pursue and idea or become and entrepreneur in the future. While slight majorities of these people ( $54 \%$ of women and $63 \%$ of men) indicated that they would spend a few hours thinking about a potential idea if they had one, almost none thought it likely that they would start a business or non-profit at some point ( $4 \%$ of women and $12 \%$ of men).

## PRELIMINARY DRAFT

Those who had a prior idea, but did not pursue it far are slightly more likely to indicate interest in entrepreneurial activities. The 20 percent of women and 21 percent of men who report that they had an idea, but did not think about it much or thought about it only occasionally, are 4 (women) and 13 (men) percentage points more likely to indicate that they would pursue a new idea. They are also much more likely to indicate that it is likely or very likely that they will start a business or non-profit at some point in their life (19 and 18 percentage points).

While thinking a little about a past idea is moderately associated with greater willingness to engage in entrepreneurial activity, those who at least got to the point of doing research and talking to people are substantially more likely to indicate a willingness to engage in entrepreneurial activity. Thirty percent of women and 27 percent of men report that they pursued an idea to the point of doing some research or talking to people. Nearly all of these women ( 84 percent) and men ( 95 percent) indicate that they would be likely to spend more than a few hours pursuing a new idea. As such, such women and men are 31-32 percentage points more likely than those who did report recognizing a past idea to pursue a new idea. Similarly, women and men who did research/talked to people are 40-41 percentage points more likely to believe that they will start a business or non-profit at some point.

Pursuing a past idea beyond the early dabbling stage is associated with very little increase in the probability that someone would pursue a new idea, but it associated with moderate increases in the probability that someone thinks it likely that they would start a business or non-profit at some point in their life.

Table 7: Relationship between past participation in entrepreneurial activity and willingness to pursue idea or likelihood entrepreneurship

|  | Women |  | Men |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Percent <br> likely to <br> purse an <br> idea | Percent likely <br> to become an <br> entrepreneur <br> at some point | Percent <br> likely to <br> purse an <br> idea | Percent likely to <br> become an <br> entrepreneur at <br> some point |
| Never recognized an idea | $53 \%$ | $4 \%$ | $63 \%$ | $12 \%$ |
| Recognized idea and did <br> not think about it much <br> or only occasionally <br> thought about it | $57 \%$ | $23 \%$ | $76 \%$ |  |
| Recognized idea and did <br> some research/talked to <br> people | $84 \%$ | $45 \%$ | $95 \%$ | $50 \%$ |
| Recognized idea and <br> attempted to develop <br> product/service | $84 \%$ | $68 \%$ | $91 \%$ | $62 \%$ |
| Recognized idea and <br> launched | $85 \%$ | $74 \%$ | $98 \%$ | $91 \%$ |

## 3. Women who believe that entrepreneurs enjoy benefits are more likely to indicate willingness to consider entrepreneurship

Among women who indicate that they believe that entrepreneurs earn more, that entrepreneurs are respected in their communities, or that entrepreneurs enjoy more flexible schedules, 72-80 percent indicate that they would likely pursue a new idea and 36-46 percent indicate that they will likely be an entrepreneur at some point. Among women who do not believe that entrepreneurs enjoy these benefits, only 6064 percent indicate that they would pursue a new idea and only 13-20 percent indicate that they will likely be an entrepreneur at some point.

Interestingly, the likelihood that men indicate an interest in entrepreneurial activities is not strongly correlated with views on the benefits of entrepreneurship. While the men who are more likely to believe that entrepreneurs enjoy these benefits are more likely to pursue a new idea or believe they will become entrepreneurs at some point, the relationships are small relative to women and not statistically significant.

## D. Awareness and utilization of pre-entrepreneur resources

In addition to differences in views of entrepreneurs, women's low engagement in pre-entrepreneurial activities may reflect the fact that women are less likely to be aware of and engage in resources that may help them recognize and evaluate potential ideas and/or figure out how to take the first steps toward becoming an entrepreneur. For instance, women survey respondents were less likely to report having engaged the BLP and more likely to indicate that they had not heard of it. Women were also less likely to indicate that they had never attended a networking/entrepreneurial event ( $22 \%$ vs. $29 \%$ ). Among those who had attended such an event, women were much more likely to report feeling intimidated. Among those who had attended such an event, 61 percent of women but only 42 percent of men reported feeling intimidated. Consistent with this, a strong minority of women $(44 \%)$ indicate that they would be more likely to attended an event described as women only or open to women.

Figure 2: Awareness of and participation in Blackstone LaunchPad


## V. Conclusion

While fully understanding why women are less likely to engage in preentrepreneurial activities will require more research. Our results provide a foundation for those looking to investigate this issue further or looking to boost women's entrepreneurs. Specifically, there is work to be done helping women generate and recognize potential ideas, helping women understand the expected costs and benefits of being an entrepreneur, and in helping women find and engage resources that may increase their entrepreneurial skills/confidence.

Concurrent with this survey, several programs were implemented at the University of Montana that attempted to address some of these issues. Most notably, the University ran a program entitled "Pursue Your Passion". This was in response to particularly low female participation in the 2015 Business Startup Challenge. The program's goal was to encourage more women to consider entrepreneurship and participate in the 2016 Business Startup Challenge. The program comprised a kickoff event with networking and keynote female speakers, followed by a female speaker series and one-on-one mentoring. The program used a number of techniques to attract and engage women:

- Language: instead of discussing entrepreneurship or starting a business, the program language focused on identifying and pursuing passions
- Imagery: the design of marketing materials was subtly oriented to a female audience including a background watermark image of Superwoman.
- Outreach: Female faculty and university staff were asked to reach out directly to invite female students

While it is too soon to know if these interventions have produced their intended long term effects, we note that women's registrations in the BLP ticked up slightly and female participation in the Business Startup Challenge grew from less than 10\% in 2015 to over $40 \%$ in 2016. We hope to conduct additional research to both understand what types of programs can increase women's willingness to consider entrepreneurship and what types of messaging attracts women to such programs.


[^0]:    ${ }^{1} 556$ students (and 808 people overall) have registered, but only 519 (or 770) include gender information.
    ${ }^{2}$ See for instance: Kepler, E. (2007). Are male and female entrepreneurs really that different?. Office of Advocacy, US Small Business Administration; Robb, A. M., \& Watson, J. (2012). Gender differences in firm performance: Evidence from new ventures in the United States. Journal of Business Venturing, 27(5), 544-558; Klapper, L. F., \& Parker, S. C. (2011). Gender and the business environment for new firm creation. The World Bank Research Observer, 26(2), 237-257; DeMartino, R., \& Barbato, R. (2003). Differences between women and men MBA entrepreneurs: exploring family flexibility and wealth creation as career motivators. Journal of business venturing, 18(6), 815-832; Robb, A., Coleman, S., \& Stangler, D. (2014). Sources of Economic Hope: Women's Entrepreneurship. Available at SSRN; Koellinger, P., Minniti, M., \& Schade, C. (2013). Gender Differences in Entrepreneurial Propensity*. Oxford bulletin of economics and statistics, 75(2), 213-234.
    Understanding Women's Participation in Pre-Entrepreneurial Activities: Evidence

