Antecedents of Entrepreneurial Intention: An Integrative Model

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Abstract

The purpose of this study was to examine potential influences of gender-role on entrepreneurial intention by incorporating Bem's (1974) gender role orientation variables into the entrepreneurial intention framework proposed by Liñán and Chen (2009). Results indicated that when personal attitude toward entrepreneurship (PA) and perceived behavioral control (PBC) were entered into a regression analysis predicting entrepreneurial intention, their effects overwhelmed those of the gender role variables (i.e., masculinity, femininity, and androgyny). Based on this finding, separate regression equations for PA and PBC were then generated in which gender role variables were treated as predictor variables. Results of this analysis indicated that masculinity was a significant positive predictor of both PA and PBC while femininity was a negative predictor of both variables. Surprisingly, after controlling for the influences of other variables, androgyny was not a significant predictor of either PA or PBC. Implications and directions for future research are discussed.

Keywords: entrepreneurship, entrepreneurial intention, gender role, perceived behavioral control

1. Introduction

Entrepreneurial intention is the perceived likelihood that an individual will eventually become an entrepreneur. These intentions play a significant role in ultimate decisions of individuals to start new firms (Liñán and Chen, 2009). Given the criticality of entrepreneurship to the viability and growth of the economy (e.g; Phipps and Prieto, 2015; Baptista, Escara & Madruga, 2008), researchers have taken a keen interest in attempting to identify antecedents of entrepreneurial intention and, ultimately, entrepreneurial behavior. Of the numerous factors that have been shown to be related to entrepreneurial intention in past studies, one finding that has consistently been reported is that individuals who have had some form of entrepreneurial education (typically in the form of college coursework) are more likely to report higher levels of entrepreneurial intention (e.g., Rauch and Hulsink, 2015; Bae, Qian, Miao, and Fiet, 2014; Robinson and Stubberund, 2014). As noted by Robinson and Stubberund (2014), entrepreneurial training tends to increase the proclivity of individuals to engage in more risk-taking behavior, be more innovative, and to be more proactive, all of which contribute to higher levels of entrepreneurial intent by individuals. A study by Geidhof, Weiner, Agans, Mueller, and Lerner (2014) also indicated that personal characteristics including self-regulation, innovation orientation, and having entrepreneurial role models were all significant predictors of entrepreneurial intent for participants. Lee, Wong, Foo, and Leung (2011) also found that innovation orientations promoted higher levels of entrepreneurial intentions. However, for individuals currently employed in other contests, the researchers also found that variables related to the desirability of current employment environments moderated this relationship.

Numerous studies have also assessed roles of biological gender on various types of entrepreneurial behavior and attitudes toward entrepreneurship (e.g., Engle, Schlaegel, and Delanoe, 2011; Phipps and Prieto, 2015; Bhandari, 2012; Cornwall, 2011), with most studies reporting that, all else equal, males tend to have stronger entrepreneurial orientations than females. Additionally, Cornwall (2011) indicated that males and females tended to start new ventures for different reasons. Specifically, males tended to become entrepreneurs due to the desire to be independent and for financial gain. Alternatively, females were more likely to become entrepreneurs for intrinsic reasons as well as to achieve a more favorable work/family life balance.

Despite an abundance of research examining potential influences of biological gender on entrepreneurial intention, a paucity of research exists that examines potential relationships between gender-role orientation as proposed by Bem (1974) and entrepreneurial orientations and outcomes. Bem's pioneering work in this area included development of a gender role orientation scale that has been widely utilized by researchers. As opposed to biological gender, gender role pertains to certain types of orientations that society has traditionally viewed as being predominately male or predominately female. But this does not preclude males from having strong feminine gender role characteristics or females from having strong masculine gender role characteristics. Masculine traits include such elements as assertiveness, independence, aggressiveness, and dominance. On the other hand, feminine traits include elements such as being cheerful, sympathetic, affectionate, and cooperative. Bem classified individuals who possessed high levels of both masculinity and femininity traits as being androgynous. One study that examined links between gender role variables and entrepreneurship was conducted by Mueller and Data-On (2007), which assessed potential relationships between gender role orientation and entrepreneurial self-efficacy. Results of this study indicated that, at various stages of venture creation processes, masculinity and androgyny (i.e., the combination of highly masculine and highly feminine traits) are associated with requisite entrepreneurial skills including opportunity searching, planning, being creative and innovative, and leading others. The researchers also reported that gender-role orientation played a larger role in predicting entrepreneurial self-efficacy than did biological gender.

A study by Palmer, Griswold, Eidson, and Wiewel (2015) reported significant positive relationships between masculinity and entrepreneurial intent for a group of college students enrolled in business courses, but also reported that, for the female sub-group of students, both masculinity and femininity were significant positive predictors of entrepreneurial intent. Thus, results indicated that biological gender may moderate relationships between variables as well. Additionally, researchers reported that taking entrepreneurship courses also increased the likelihood of females reporting high levels of entrepreneurial intention. A study by Liñán and Chen (2009), which assessed relationships between planned behavior variables as proposed by Ajzen (1991) and entrepreneurial intent found that personal attitude toward entrepreneurship (PA) and perceived behavioral control (PBC), or the degree of confidence individuals had in being successful as an entrepreneur, accounted for over half of the variation in entrepreneurial intent (i.e., the reported adjusted R-square was .579).

However, potential limitations to findings are that both of these predictors are global and multi-faceted, containing many underlying dimensions that are left unexplained and, despite findings in other studies, noting that gender role orientation may impact entrepreneurial intentions, this dimension was not explicitly addressed by the researchers.

2. Purpose

The purpose of this study is to extend the research examining potential influences that gender-role variables (i.e., masculinity, femininity, and androgyny) may have on entrepreneurial intent by incorporating these variables into the Liñán and Chen (2009) framework for predicting EI. The variables that Liñán and Chen utilized as predictors of entrepreneurial intention (i.e., personal attitudes toward entrepreneurship (PA) and perceived behavioral control (PBC)) accounted for much of the total variation in entrepreneurial intention. However, despite evidence from other studies indicating that gender role orientation may also impact entrepreneurial intention, the potential influences of gender-role variables on PA and PBC has not been addressed in past research.

3. Methodology

A survey consisting of a total of 90 items was administered to students enrolled in business courses at a small Midwestern university (See Appendix A). The survey included the 60 item Bem Sex Role Inventory as well as scaled questions measuring subjective norm, perceived behavioral control, personal attitude toward becoming an entrepreneur, and entrepreneurial intention. These survey items were identical to those utilized by Liñán and Chen (2009). Additionally, questions related to student demographics, self-reported GPA, work experience, whether individuals knew an entrepreneur, and number of entrepreneurship courses taken was also contained in the survey. Regression analysis was the primary means of analysis. Stepwise regression with backward elimination was utilized in order to identify variables that were associated with dependent variables that comprised the model.

4. Results

A total of 282 students responded to the survey. Of this total, 183 were male, 95 were female, and four did not denote a gender. Consistent with many past studies, males had a significantly higher mean entrepreneurial intention score than females ($t = 2.53$; $p = .006$). Relative to females, males also had significantly higher masculinity ($t = 4.56$; $p<.001$) and androgyny ($t = 4.32$; $p <.001$) scores. Conversely, females reported significantly higher femininity scores ($t = 5.24$; $p <.001$).This finding was not surprising. But it does illustrate a strong association between biological gender and gender role orientation of respondents.

Table 1 presents results of the regression analysis examining direct relationships between gender-role variables only and entrepreneurial intention. In this equation, masculinity was a significant positive predictor of EI ($b = .567$; $p = .002$) and femininity approached significance as a positive predictor of EI ($b = .380$; $p =.080$). Androgyny also had a positive coefficient but was not significant ($b = .914$; $p = .221$). The adjusted R square for this equation was .067.

Table 2 presents results of the regression analysis examining relationships between gender-role variables as well as the variables contained in the Liñán and Chen framework (i.e., perceived behavioral control (PBC), and personal attitude toward becoming an entrepreneur (PA)). In this equation, only PBC ($b = .486$; $p < .001$) and PA ($b = .721$; p , .001) were significant predictors of EI. As expected, these two variables overwhelmed the direct influences of gender-role variables. The adjusted R square was .705, indicating that over 70% of the variation in EI was being accounted for by the two variables.

In order to better, discern the influence of gender-role variables as potential antecedents to the two Liñán and Chen variables that took on dominance in the previous stage of the analysis, separate regression equations that examined both gender-role variables as well as control variables contained in the Palmer et. al. (2015) study was run as predictors on both PBC and PA. Results of these analyses are contained in Tables 3 and 4 respectively. As noted in Table 3, masculinity was a significant positive predictor of PBC ($p = 1.36$; $p < .001$).

However, femininity was a significant negative predictor of PBC (-.370; $p = .045$). Androgyny approached significance as a positive predictor of PBC as well ($p = .783$; $p = .093$). In terms of control variables, both part-time work experience ($b = .047$; $p =.031$) and had taken an entrepreneurship course ($b =.561$; $p < .001$) were also significant positive predictors of PBC. The adjusted R-square for this model was .249.

In the equation in Table 4, in which relationships between gender-role variables as well as the control variables utilized in the Palmer et. al. (2015) study were run on PA, results once again indicated a significant positive relationship between masculinity and EI (b = 1.87; p <.001) and a significant negative relationship between femininity and EI (b =-.653; p <.001). In this analysis, androgyny did not approach significance as a predictor and dropped out of the equation. Knows an entrepreneur (b = .572; p =.002), had taken an entrepreneurship course (b = .344; p =.031), and full-time work experience (b = .033; p = .028) were also significant positive predictors of PA. The adjusted R-square for this model was .305.

5. Discussion

Despite the fact that many individuals seek careers as entrepreneurs in order to pursue intrinsic interests or to achieve a more favorable work/family life balance (e.g., Cornwall, 2011), which could be considered more feminine characteristics, attitudes toward becoming an entrepreneur (PA) as well as confidence in becoming an entrepreneur (PBC) seemed to be driven more by Bem's (1974) masculinity gender-role variables. These include characteristics such as independent, assertive, dominant, and competitive. In fact, the negative coefficient between femininity and both PA and PBC suggest that Bem's femininity characteristics such as helpful, sensitive to other's needs, and affectionate seem to actually deter individual attitudes regarding entrepreneurship. This finding would seem to provide partial support for findings of Mueller and Dato-On (2007), who reported that individuals with higher masculinity scores tended to have higher levels of entrepreneurial self-efficacy with respect to marshalling and implementing tasks than individuals with higher femininity scores. Interestingly, once the main effects of masculinity and femininity were accounted for, androgyny was not a statistically significant predictor of either PA or PBC.

While there could have been self selection bias associated with the positive relationship between personal attitude toward entrepreneurship (PA) and had taken entrepreneurship course, the fact that taking an entrepreneurship course had a positive relationship with perceived behavioral control (PBC) as well would seem to provide support that the entrepreneurial coursework increased the confidence-level of students with respect to having the requisite skills and abilities to be successful as entrepreneurs. These findings directly support those of Rauch and Hulsink (2012) who also reported positive associations between students taking entrepreneurship coursework and both PA and PBC.

Interestingly, the initial analysis indicated a marginally significant relationship between femininity and EI that had a positive coefficient. However, the femininity coefficient in predicting levels of both PA and PBC was negative. Combined, these findings suggest an underlying relationship between femininity and EI may exist that is not being captured by these variables. It seems possible that this underlying dimension of femininity may somehow be related to elements of entrepreneurial self-efficacy (e.g., Mueller and Data-On, 2007; Wilson, Kickul, Marlino, Barbosa, and Griffiths, 2009).

6. Limitations and Directions for Future Research

A limitation of the current study was that it was conducted at one institution and made use of a sample consisting primarily of business school students who, for the most part, were of traditional college age (i.e., 18 – 24 years old). Future studies should make use of more diverse samples with respect to respondent ages and educational backgrounds. In this manner, potential influences of generational differences as well as potential differences associated with educational levels and experiences on entrepreneurial intention or antecedents to entrepreneurial intention may be assessed as well.

In future studies, it may also be fruitful for researchers to separately analyze relationships between gender role variables and both PBC and PA by biological gender. Given that there is some evidence that levels of EI may vary by gender, it seems logical that variations could also exist by gender with respect to relationships between these variables. Finally, additional research should focus on gender role orientation and actual entrepreneurial behaviors and outcomes. For example, future studies could assess how variations in gender role orientation might impact actual venture creation and, subsequently, how gender role might impact the ultimate success of such ventures. Such research could also assess the potential moderating influences of factors such as entrepreneurial education and prior employment experience in formulating a more comprehensive model for understanding the complexities associated with predicting entrepreneurial performance outcomes.

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Table 1: Regression Equation – Gender-Role Variables on Entrepreneurial Intention (n = 282)

Variables	Coefficient	Standard Error	p-value
Intercept	-1.065	1.133	.347
Masculine	0.567	.183	.002**
Feminine	0.380	.216	.079
Androgyny	0.914	.746	.221

R-Square = 0.0767
Adj. R Square = 0.0667
F statistic = 7.7043
Sig F = 5.81E-05

p < .05 * p<.01**

Table 2: Regression Equation – Liñán and Chen and Gender-Role Variables on Entrepreneurial Intention (n = 282)

Variables	Coefficient	Standard Error	p-value
Intercept	-.985	.609	.107
PBC:	.488	.055	<.001**
PA:	.733	.053	<.001**
Masculine	-.132	.069	.486
Feminine	-.001	.154	.997
Androgyny	-.568	.387	.142

R-Square = 0.709
Adj. R Square = 0.704
F statistic = 134.82
Sig F = <.001**

p < .05 * p<.01**

Table 3: Regression Equation – Predicting Perceived Behavioral Control (PBC) (n = 282)

Variables	Coefficient	Standard Error	p-value
Intercept	-.018	.799 .981	
PT Work:	.047	.022.030*	
Taken Course:	.560	.152	<.001**
Masculine	1.363	.200<.001**	
Feminine	-.370	.184.045*	
Androgyny	.782	0.46.093	

R-Square = 0.2624
Adj. R Square = 0.2490
F statistic = 19.6420
Sig F = 9.75E-17

p < .05 * p<.01**

Table 4: Regression Equation – Predicting Personal Attitude Towards Entrepreneurship (n = 282)			
Variables	**Coefficient**	**Standard Error**	**p-value**
Intercept	.666	.806.409	
Know Ent:	.572	.189.003**	
Taken Course:	.344	.159.031*	
FT Work	.033	.015.028*	
Masculine	1.871	.191	<.001**
Feminine	-0.653	.144	<.001**
R-Square = 0.3169 Adj. R Square = 0.3045 F statistic = 25.6114 Sig F = <.001** p < .05 * p<.01**			

Appendix A

Rate yourself on each item, on a scale from 1 (never or almost never true) to 7 (almost always true). Please CIRLCE only ONE answer per item and please answer every question.

	Never or almost never true						**Always or almost always true**
1. Self-reliant	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. Yielding	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. Helpful	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. Defends Own Beliefs	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. Cheerful	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. Moody	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. Independent	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. Shy	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9. Leadership Ability	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10. Sensitive to Other's Needs	**1**	**2**	**3**	**4**	**5**	**6**	**7**
11. Truthful	**1**	**2**	**3**	**4**	**5**	**6**	**7**
12. Willing to Take Risks	**1**	**2**	**3**	**4**	**5**	**6**	**7**
13. Understanding	**1**	**2**	**3**	**4**	**5**	**6**	**7**
14. Secretive	**1**	**2**	**3**	**4**	**5**	**6**	**7**
15. Makes Decisions Easily	**1**	**2**	**3**	**4**	**5**	**6**	**7**
16. Compassionate	**1**	**2**	**3**	**4**	**5**	**6**	**7**
17. Sincere	**1**	**2**	**3**	**4**	**5**	**6**	**7**
18. Self-sufficient	**1**	**2**	**3**	**4**	**5**	**6**	**7**
19. Eager to Soothe Hurt Feelings	**1**	**2**	**3**	**4**	**5**	**6**	**7**
20. Conceited	**1**	**2**	**3**	**4**	**5**	**6**	**7**
21. Conscientious	**1**	**2**	**3**	**4**	**5**	**6**	**7**
22. Athletic	**1**	**2**	**3**	**4**	**5**	**6**	**7**
23. Affectionate	**1**	**2**	**3**	**4**	**5**	**6**	**7**
24. Theatrical	**1**	**2**	**3**	**4**	**5**	**6**	**7**
25. Assertive	**1**	**2**	**3**	**4**	**5**	**6**	**7**
26. Flatterable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
27. Happy	**1**	**2**	**3**	**4**	**5**	**6**	**7**
28. Strong Personality	**1**	**2**	**3**	**4**	**5**	**6**	**7**
29. Dominant	**1**	**2**	**3**	**4**	**5**	**6**	**7**
30. Soft Spoken	**1**	**2**	**3**	**4**	**5**	**6**	**7**
31. Likable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
32. Masculine	**1**	**2**	**3**	**4**	**5**	**6**	**7**
33. Warm	**1**	**2**	**3**	**4**	**5**	**6**	**7**
34. Solemn	**1**	**2**	**3**	**4**	**5**	**6**	**7**

	Never or almost never true						Always or almost always true
35. Willing to Take a Stand	**1**	**2**	**3**	**4**	**5**	**6**	**7**
36. Tender	**1**	**2**	**3**	**4**	**5**	**6**	**7**
37. Friendly	**1**	**2**	**3**	**4**	**5**	**6**	**7**
38. Aggressive	**1**	**2**	**3**	**4**	**5**	**6**	**7**
39. Gullible	**1**	**2**	**3**	**4**	**5**	**6**	**7**
40. Inefficient	**1**	**2**	**3**	**4**	**5**	**6**	**7**
41. Loyal	**1**	**2**	**3**	**4**	**5**	**6**	**7**
42. Unpredictable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
43. Forceful	**1**	**2**	**3**	**4**	**5**	**6**	**7**
44. Feminine	**1**	**2**	**3**	**4**	**5**	**6**	**7**
45. Reliable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
46. Analytical	**1**	**2**	**3**	**4**	**5**	**6**	**7**
47. Sympathetic	**1**	**2**	**3**	**4**	**5**	**6**	**7**
48. Jealous	**1**	**2**	**3**	**4**	**5**	**6**	**7**
49. Act as a Leader	**1**	**2**	**3**	**4**	**5**	**6**	**7**
50. Childlike	**1**	**2**	**3**	**4**	**5**	**6**	**7**
51. Adaptable	**1**	**2**	**3**	**4**	**5**	**6**	**7**
52. Individualistic	**1**	**2**	**3**	**4**	**5**	**6**	**7**
53. Doesn't Use Harsh Language	**1**	**2**	**3**	**4**	**5**	**6**	**7**
54. Unsystematic	**1**	**2**	**3**	**4**	**5**	**6**	**7**
55. Competitive	**1**	**2**	**3**	**4**	**5**	**6**	**7**
56. Loves Children	**1**	**2**	**3**	**4**	**5**	**6**	**7**
57. Tactful	**1**	**2**	**3**	**4**	**5**	**6**	**7**
58. Ambitious	**1**	**2**	**3**	**4**	**5**	**6**	**7**
59. Gentle	**1**	**2**	**3**	**4**	**5**	**6**	**7**
60. Conventional	**1**	**2**	**3**	**4**	**5**	**6**	**7**

CIRCLE your level of agreement with the following sentences from 1 (total disagreement) to 7 (total agreement).

	Total Disagreement						Total Agreement
	1	2	3	4	5	6	7
61. Being an entrepreneur implies more advantages than disadvantages to me	□	□	□	□	□	□	□
62. A career as entrepreneur is attractive for me.	□	□	□	□	□	□	□
63. If I had the opportunity and resources, I'd like to start a firm.	□	□	□	□	□	□	□
64. Being an entrepreneur would entail great satisfactions for me.	□	□	□	□	□	□	□
65. Among various options, I would rather be an entrepreneur.	□	□	□	□	□	□	□

If you decided to create a firm, would people in your close environment approve of that decision?

	Total Disagreement						Total Agreement
	1	2	3	4	5	6	7
66. Your close family	□	□	□	□	□	□	□
67. Your friends	□	□	□	□	□	□	□
68. Your colleagues	□	□	□	□	□	□	□

To what extent do you agree with the following statements regarding your entrepreneurial capacity?

	Total Disagreement						Total Agreement
	1	2	3	4	5	6	7
69. To start a firm and keep it working would be easy for me.	□	□	□	□	□	□	□
70. I am prepared to start a viable firm.	□	□	□	□	□	□	□
71. I can control the creation process of a new firm.	□	□	□	□	□	□	□
72. I know the necessary practical details to start a firm.	□	□	□	□	□	□	□
73. I know how to develop an entrepreneurial project.	□	□	□	□	□	□	□
74. If I tried to start a firm, I would have a high probability of succeeding.	□	□	□	□	□	□	□

Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement.)

	Total Disagreement						Total Agreement
	1	2	3	4	5	6	7
75. I am ready to do anything to be an entrepreneur.	□	□	□	□	□	□	□
76. My professional goal is to become an entrepreneur.	□	□	□	□	□	□	□
77. I will make every effort to start and run my own firm.	□	□	□	□	□	□	□
78. I am determined to create a firm in the future.	□	□	□	□	□	□	□
79. I have very seriously thought of starting a firm.	□	□	□	□	□	□	□
80. I have the firm intention to start a firm someday.	□	□	□	□	□	□	□

81. How many years of part time work experience do you have? _____
82. How many years of full time work experience do you have? _____
83. How many years of self-employment work experience do you have? _____

Please circle one:

84. GENDER: Male Female
85. AGE: less than 20 yrs. 20 – 30 yrs. old older than 30 yrs.
86. Do you know personally an entrepreneur? (circle one) YES NO
87. Does anyone in your immediate family own a business? (circle one) YES NO
88. Have you ever taken an entrepreneurship course? (circle one) YES NO
89. What is your current cumulative GPA? _____
90. What is your major? _____ _____