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ORIGINAL SCIENTIFIC PAPER

Nascent Entrepreneurs: Gender, Culture, and Perceptions

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A B S T R A C T

We assess gender differences in 1526 nascent entrepreneurs (college students) across four countries to test a model of entrepreneurial intentions incorporating gender, culture, and perceptions about entrepreneurship motives and barriers. In contrast to prior research on surviving entrepreneurs, we study people who may be at the very beginning of entrepreneurial careers.

The model proves significant—we find support for hypotheses regarding the impact of gender, culture, and perceptions of motives and barriers. There are substantial differences between men and women. Culture affects students' intentions, women have lower levels of entrepreneurial intentions, motives generally have a positive influence on intentions, barriers have a negative influence, men appear more influenced by motives, and women appear more influenced by barriers.

The results in China provide interesting exceptions in the analyses and suggest directions for future research specific to that country. As a whole, the study results suggest directions for future research on entrepreneurial intentions. We also discuss implications of the study for entrepreneurship education.

KEY WORDS: *gender, culture, students, entrepreneurship, entrepreneurial intentions, entrepreneurship education, motives, barriers*

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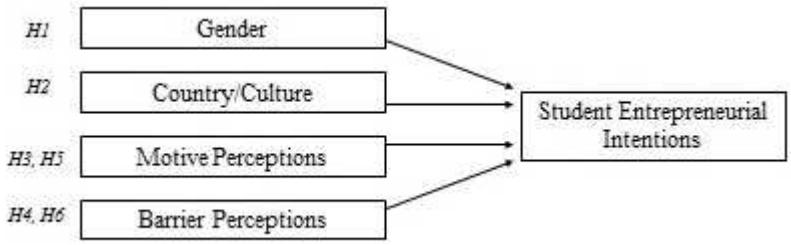
Introduction

Entrepreneurship literature on gender and culture is growing but more is needed (Radović-Marković, 2013). Previous research on gender and culture is mostly on existing entrepreneurs. There is little gender-oriented, cross-cultural comparative research on nascent entrepreneurs (a recent exception is Kew, Herrington, Litovsky and Gale, 2013) and cross-cultural studies focused on college students are rare (e. g., Pruett, Shinnar, Toney, Llopis, and Fox, 2009). Thus, we survey university students from the United States, China, Belgium, and Turkey who may be at the beginning of entrepreneurial careers to study how gender, culture, and perceptions of motives and barriers influence entrepreneurial intentions.

After summarizing literature to develop a basic model of entrepreneurial intentions and hypotheses about gender, culture, and perceptions of motives and barriers, we discuss our method, findings, and conclusions, including implications for research and for education.

Literature and Model

Figure 1: Model of Entrepreneurial Intentions



The Issue of Gender

Men are more likely to be entrepreneurs (e.g., Kickul, Wilson, Marlino and Barbosa, 2008; Minniti, Bygrave and Autio, 2005; Minniti and Nardone, 2007; Wilson, Marlino and Kickul, 2004). And, women have different entrepreneurship behaviors and motives (e.g., Robichaud, McGraw, Cachon, Bolton, Codina, Eccius-Wellmann, and Walsh, 2013).

These gender differences may have various causes. Men seem more inclined to take risks (Sexton and Bowman-Upton, 1990) and may have a

greater locus of control (Mazzarol, Volery, Doss and Thein, 1999), more confidence (Bandura, 1992) or higher entrepreneurial self-efficacy (Sanchez and Licciardello, 2012; Zhao, Seibert and Hills, 2005). Self-efficacy, defined as the self-confidence that someone has the necessary skills or abilities to be an entrepreneur, may be more important for younger people (Wilson et al., 2004). We, too, believe experience and time should reduce gender differences—they should be more evident in nascent entrepreneurs, such as students at the beginning of their careers. Thus,

H1. Gender negatively affects entrepreneurial intentions of females.

The Issue of Culture

Culture, the distinctive mental programs shared by a group of people (Hofstede 1980), influences entrepreneurship (e.g., Avolio, 2012; Kew et al., 2013; Langowitz and Minniti, 2007). Cultural socialization of young people can teach gender stereotypes (Gupta and Bhawe, 2007; Jose and Orazio, 2012; Miller and Budd, 1999), collectivism may affect intentions (Holland, 2014), and women lack entrepreneurial role-models in some cultures (Klyver and Grant, 2010).

Table 1: Cultural Differences Among Study Countries

Hofstede's Cultural Dimensions	US	China	Belgium	Turkey
PD Power distance (higher score: society accepts inequality of power)	40	80	65	66
In Individualism (higher score: society focuses on individual more than group)	91	20	75	37
MF Masculinity/feminity (higher score: competitive, focused on extrinsic rewards)	62	66	54	45
UA Uncertainty avoidance (high score: low tolerance of ambiguity and risk)	46	30	94	85

Note: Data retrieved from Hofstede Centre, www.geert-hofstede.com

As shown in Table 1, Hofstede's (1980) model of culture has four dimensions: power-distance (egalitarian versus acceptance of inequality), individualism versus collectivism (I versus We orientation), masculinity-femininity (competitiveness and extrinsic rewards versus cooperation and intrin-

sic rewards), and uncertainty avoidance (tolerance of ambiguity in decision-making). These distinctive cultural attributes may affect entrepreneurship. High power-distance may limit entrepreneurial opportunity and freedom for many, making entrepreneurship less likely than in a low power-distance society. An individualistic society may encourage pursuit of individual entrepreneurial aspirations, while a collectivist one may discourage them. A culture which avoids uncertainty is likely to discourage entrepreneurial risk-taking and ambiguity. Last, a masculine culture appears likely to encourage competitive thinking, perhaps making entrepreneurship more likely. Thus:

H2a. Cultural individualism is positively related to entrepreneurial intentions.

H2b. Cultural uncertainty avoidance is negatively related to entrepreneurial intentions.

H2c. Cultural power distance is negatively related to entrepreneurial intentions.

H2d. Cultural masculinity is positively related to entrepreneurial intentions.

Perceptions of Motives and Barriers

In addition to the influence of gender and culture on entrepreneurial intentions, individuals perceive motives and barriers, which may be intrinsic (e.g., desire for independence and risk aversion) or extrinsic (money and economic climate). Prior research with students shows that barriers and motives do matter (Birdthistle, 2008; Finnerty and Krzystofik, 1985; Sandhu, Sidique and Riaz, 2011). We argue that pre-existing perceptions of motives and barriers should be especially important for nascent entrepreneurs since they lack much experience, thus:

H3. The strength of perceptions regarding motives is positively related to entrepreneurial intentions.

H4. The strength of perceptions regarding barriers is negatively related to entrepreneurial intentions.

Men and women are likely to differ in their perceptions. Men are likely to perceive a larger network of entrepreneurial contacts (Klyver and Grant, 2010) and to have different motives (Humbert and Drew, 2010). Especially, they may have more self-confidence (Kirkwood, 2009) and a lower fear of failure (Shinnar, Giacomin and Janssen, 2012). Thus:

H5a. Perceptions of motives will have a greater impact for men than for women on entrepreneurial intentions.

H5b. Perceptions of barriers will have a greater impact for women than for men on entrepreneurial intentions.

Culture also may interact with perceptions of motives and barriers. Cultural individualism should encourage the pursuit of entrepreneurial motives. Uncertainty avoidance and power distance should raise the importance of barriers, and a masculine culture that encourages competition should strengthen individuals' valuation of motives. Thus:

H6a. Higher cultural individualism will increase the impact of motive perceptions on entrepreneurial intentions.

H6b. Higher cultural uncertainty avoidance will increase the impact of barrier perceptions on entrepreneurial intentions of students.

H6c. Higher cultural power distance will increase the impact of barrier perceptions on entrepreneurial intentions of students.

H6d. Higher cultural masculinity will increase the impact of motive perceptions on entrepreneurial intentions of students.

Method

Participants

Our sample consisted of 1526 university students (317 Americans, 333 Chinese, 417 Belgian, and 459 Turkish). 69.6% were from business departments, the rest were from arts, sciences, engineering, education, and other departments. 47.6 % were female. 17.6% of respondents were 1st-year students, 18.1% were 2nd-year, 27.8% were 3rd-year, 20.6 % were 4th-year, and 16.3% were graduate students.

Questionnaires and Measures

Our questionnaire was developed from one used previously by other authors (Genesca and Veciana, 1984; Veciana, Aponte and Urbano, 2005). American and Chinese students were asked in English, Belgians in French, and Turkish students in Turkish to provide data on various individual factors, educational environment, and perceptions of motives and barriers. For example, scale answers for entrepreneurial intention ranged from 1 (no, never) to 4 (yes, I have a definite plan to start my own business), and five-

point Likert scales from 'very unimportant' to 'very important' measured beliefs about 16 motives and 20 barriers. We factor analyzed the data to aggregate motives and barriers, a process used by other researchers (e.g., Pruett et al., 2009). This gave five motive factors: pursuit of profit/social status, independence, creation, personal development, and professional dissatisfaction and five barrier factors: lack of support structure and fiscal/ administrative costs, lack of knowledge/experience, economic climate/ lack of entrepreneurial competencies, self-confidence, and risk aversion. To test factor construct validity, a confirmatory factor analysis (CFA) was conducted and yielded acceptable fit.

Findings: Regression Analysis

Table 2 below shows binary correlations. The masculinity/femininity dimension is excluded from further analysis due to multicollinearity (a very low tolerance score), so Hypotheses *H2d* and *H6d* were not tested. Table 3 shows the results of regressing culture, gender, and motive/barrier perceptions on entrepreneurial intentions. Table 4 shows results for regressions separated by gender and country to explore H5a and H5b.

Table 3 supports several hypotheses. H1 is supported—females have lower entrepreneurial intentions. Using a dummy variable with the value 1 for women, the coefficient for gender is significant and negative.

H2a is not supported—cultural individualism is not positively related to intentions. The coefficient for individualism is significant, but in the opposite direction. Higher individualism is related to lower intentions.

H2b is not supported—uncertainty avoidance is not negatively related to entrepreneurial intentions. The coefficient for uncertainty avoidance is significant, but in the opposite direction. When cultural uncertainty avoidance is higher, entrepreneurial intentions are higher.

H2c is supported—power distance is negatively related to entrepreneurial intentions. The coefficient for uncertainty avoidance is significant and negative. When cultural power distance is higher, entrepreneurial intentions are lower.

H3 is partly supported—the strength of perceived motives is positively related to intentions. In the regression, two of five motive factors are significantly and positively related to intentions—the pursuit of profit and social status, and the desire to create.

H4 is partly supported—the strength of perceived barriers is negatively related to intentions. Three of five barriers are significantly and negatively related to intentions—economic climate/lack of entrepreneurial competencies, lack of self-confidence, and risk-aversion.

Table 4 shows partial support for H5a and H5b. H5a is partly supported—motive perceptions affect men more than women, with at least one significant motive in each country. In Belgium, profit and social status is significant for males. In Turkey, independence is significant and in the US and Turkey creation is significant. Strangely, in Chinese males, independence is negatively related to entrepreneurial intentions.

For women, motives do not explain entrepreneurial intentions. The sole exception is the desire to create for women in Turkey. Otherwise, across four distinct countries/cultures, women's perceptions of motives are unrelated to their entrepreneurial intentions.

However, barrier perceptions do help explain female intentions. H5b is partly supported—perceptions of barriers have a greater impact on the intentions of women. In three of four countries, males are negatively influenced by economic climate and lack of entrepreneurial competencies, and in Turkey risk aversion. For females, the story depends on intrinsic barriers. US and Belgian females are negatively affected by lack of self-confidence. For Turkish females, the standardized coefficients show that the negative influence of risk-aversion is greater than the positive influence of the desire to create. Except in China, fear seems to matter for females.

Overall, across countries the significant perceptions for woman are intrinsic, and mostly barriers. Male intentions are influenced by a mix of extrinsic and intrinsic motives and barriers.

Hypotheses 6a-6c are not supported—cultural dimensions do not increase the impact of motive and barrier perceptions on entrepreneurial intentions. We did a regression with interaction variables for individualism, uncertainty avoidance and power distance (e.g., Individualism* MotiveFactor1, the same for motive 2 and so on), but none of the interaction variables were significant.

Table 2: Binary Correlations for Country, Gender, Motives, Barriers, and Intentions

	Mean	**S.D**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1. Country			1												
2. Gender			.041	1											
3. Profit, status	3.55	.73	.243**	-.005	1										
4. Desire for indep.	4.24	.72	.152**	.077**	.408**	1									
5. Creation	3.99	.84	.257**	.127**	.385**	.480**	1								
6. Pers'l devel.	3.77	.99	.221**	.060*	.448**	.355**	.299**	1							
7. Prof'l dissat.	3.40	.86	.254**	.152**	.305**	.331**	.275**	.382**	1						
8. Lack of support	3.37	.77	.063*	.215**	.249**	.187**	.204**	.218**	.320**	1					
9. Lack knowledge/exp.	3.59	.91	.064*	.217**	.233**	.225**	.208**	.249**	.302**	.588**	1				
10. Econ.climate/comp.	3.99	.74	.115**	.199**	.278**	.349**	.257**	.232**	.304**	.413**	.465**	1			
11. Lack self-conf.	3.30	.89	-.009	.210**	.266**	.189**	.195**	.191**	.284**	.520**	.559**	.399**	1		
12. Risk aversion	3.33	.93	.046	.184**	.209**	.106**	.105**	.191**	.309**	.427**	.431**	.438**	.461**	1	
13. Entrep'l intentions	1.63	1.06	.516**	-.118**	.272**	.150**	.225**	.251**	.131**	-.054*	-.050	-.035	-.114**	-.133**	1

N = 1291 to 1536, missing cases excluded pairwise

*p<.05, **p<.01.

Table 3: Hierarchical Regression Coefficients for Entrepreneurial Intentions of Students

	B						Standardized *B* coefficients for full model
	Step 1 Gender	**Step 2 Individualism**	**Step 3 UncerAvoid**	**Step 4 Power Dist**	**Step 4 Motives**	**Step 5 Barriers**	
Intercept	2.003**	3.029**	2.357**	8.521**	7.692**	8.060**	19.278
Gender (dummy var)	-.252**	-.410**	-.373**	-.434**	-.439**	-.339**	-7.132
Culture							
Individualism		-.014**	-.017**	-.050**	-.048**	-.046**	-24.303
Uncertainty avoidance			.011**	.019**	.018**	.017**	16.875
Power distance				-.075**	-.071**	-.070**	-.877
Motives							
Profit, social status					.66	.126**	0.87
Independence					-.015	.000	.000
Creation					.106**	.112**	.089
Personal devel.					.022	.035	.033
Prof. dissatisfaction					-0.53	.008	.006
Barriers							
Support structure, costs						.009	.007
Knowledge & exper.						-.038	-.033
Econ. clim., lack. comp.						-.102	-.072
Self-confidence						-.083**	-.069
Risk aversion						-.105	-.093
Change in *F*	18.330**	196.508**	116.466**	478.428**	4.673**	16.633**	
Change in R^2	.014	.131	.071	.213	.010	.030	
Total model R^2	.014	.145	.216	.428	.438	.469	

Note. Dependent variable Student Entrepreneurial Intentions, $n = 1526$ *p<.05, **p<.01

Table 4: Motive and Barrier Impacts on Entrepreneurial Intentions, Separated by Gender and Country

	β															
	Male								**Female**							
	American		**Chinese**		**Belgian**		**Turkish**		**American**		**Chinese**		**Belgian**		**Turkish**	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Pursuit of profit and social status	.012	.063	.151	.201	.162	.179*	.064	.128	-.077	-.016	-.100	.005	.147	.163	-.028	.067
Desire for independence	-.053	-.013	-379*	-.348*	.008	.033	.167*	.167*	.176	.114	-.137	-.029	.170	.138	.047	.030
Creation	.284**	.300**	.035	.074	.099	.122	.267**	.207**	.094	.117	.074	.084	-.116	-.089	.171*	.157*
Personal development	.130	.133	-.088	-.149	.066	.079	-.053	-.038	.101	.145	.098	.180	.035	.063	.052	.097
Professional dissatisfaction	-.070	-.031	.031	.033	-.154	-.110	-.149*	-.029	.049	.005	.017	.008	-.094	-.111	-.165*	-.061
Lack of support, structure and fiscal or administrative costs		-.153		.104		.012		.125		-.078		-.233		.130		.119
Lack of knowledge and experience		.041		.107		-.063		.041		-.196		.127		-.021		-.065
Economic climate and lack of entrepreneurial competencies		-.118		-.321*		-.213**		-.171*		-.042		-.224		-.025		-.055
Lack of self-confidence		-.137		.040		.027		-.153		-.232*		-.116		-.319**		-.147
Risk aversion		.010		.036		-.015		-.194*		-.131		.104		-.082		-.239**
F	3.268**	2.793**	1.347	1.921*	1.917	1.919*	7.118**	6.451**	1.833	2.588*	.521	.966	1.414	2.217*	2.349*	3.984**
R^2*change*	.096	.062	.165	.113	.048	.046	.147	.096	.075	.053	.028	.075	.063	.117	.046	.098
ΔR^2	.096	.158	.165	.279	.048	.094	.147	.243	.075	.128	.028	.103	.063	.180	.046	.144

Note. All columns are standardized *β* values.
*p<.05, **p<.013

Findings: ANOVA for Motives and Barriers

Table 5 shows mean scores and ANOVA results for perceptions of entrepreneurship motives; Table 6 shows mean scores and ANOVA results for perceptions of entrepreneurship barriers. As noted earlier, students' perceptions of motives reduced to five factors: pursuit of profit and social status, desire for independence, desire to create, personal development, and professional dissatisfaction.

The gender difference was insignificant for all countries regarding the extrinsic motive of pursuit of profit and social status.

For all intrinsic motive factors, there is a significant difference between genders in at least one country. For the desire for independence, in all countries the scores of females exceeded males, but the difference was significant only in Belgium. For creation, the differences between genders were significant—female students viewed creation as more important than did males in all four countries. For personal development, the differences between male and female students were insignificant in the US, China, and Belgium, but in Turkey the female students differed significantly, seeing personal development as more important than did the male students. For professional dissatisfaction as a motive, female students' scores were higher than those of males in all countries—the difference was significant in Turkey and Belgium.

For Table 6, students' barrier perceptions reduced to five factors: lack of support structure and fiscal or administrative costs, lack of knowledge and experience, economic climate and lack of entrepreneurial competencies, lack of self-confidence, and risk aversion.

Men and women differ significantly on all barrier dimensions and females' barrier perceptions consistently exceed males' except in China, where there are no gender differences in barrier perceptions.

Table 5: ANOVA for Motives for Starting a Business

Country	Factor	Pursuit of profit and social status			Desire for independence			Creation			Personal development			Professional dissatisfaction		
		M	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***
US	Male	3.59	0.683	1.342	4.37	0.738	1.851	3.84	0.795	12.952***	3.98	0.921	2.545	3.48	0.795	1.285
	Female	3.50	0.649		4.48	0.639		4.18	0.833		3.81	0.864		3.58	0.777	
China	Male	3.19	0.641	0.128	3.65	0.888	0.772	3.30	0.734	2.738*	3.33	0.918	1.030	2.84	0.636	0.893
	Female	3.23	0.707		3.85	0.963		3.49	0.849		3.54	0.961		2.95	0.803	
Turkey	Male	3.92	0.723	0.094	4.45	0.574	0.711	4.25	0.770	5.678**	4.13	0.834	11.765***	3.55	0.887	13.043***
	Female	3.91	0.649		4.51	0.534		4.40	0.638		4.36	0.701		4.01	0.768	
Belgium	Male	3.31	0.684	1.022	4.00	0.675	12.897***	3.82	0.838	12.695***	3.36	1.029	0.064	3.17	0.725	11.874***
	Female	3.24	0.703		4.24	0.584		4.12	0.729		3.33	0.972		3.43	0.765	

*p<.10, **p<.05, ***p<.001.

Table 6: ANOVA for Barriers to Starting a Business

Country	Factor	Lack of support structure and fiscal or administra-			Lack of knowledge and experience			Economic climate and lack of entrepreneurial			Lack of self-confidence			Risk aversion		
		M	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***	***M***	***SD***	***F***
US	Male	3.31	0.738	10.356***	3.61	0.925	12.820***	4.01	0.782	9.775**	3.33	1.187	4.997**	3.40	0.812	5.785**
	Female	3.62	0.914		3.97	0.726		4.26	0.533		3.59	0.712		3.64	0.810	
China	Male	3.22	0.545	0.864	3.51	0.776	0.252	3.64	0.829	0.200	3.16	0.619	0.531	3.21	0.854	0.629
	Female	3.36	0.634		3.54	0.798		3.72	0.875		3.28	0.719		3.15	0.799	
Turkey	Male	3.18	0.859	46.985***	3.42	1.02	53.494***	3.93	0.825	46.968***	2.99	0.958	56.146***	3.01	1.120	64.091***
	Female	3.72	0.828		4.07	0.885		4.39	0.614		3.66	0.951		3.79	0.970	
Belgium	Male	3.23	0.694	8.878**	3.32	0.851	7.804**	3.76	0.660	21.086***	3.07	0.759	10.756***	3.24	0.817	5.587**
	Female	3.44	0.609		3.56	0.773		4.06	0.562		3.33	0.702		3.44	0.755	

*p<.10, **p<.05, ***p<.001.

Findings: Additional Analyses

Table 7 presents scores by country of male and female students' perceptions of the business start-up knowledge in the curriculum, the extent to which universities stimulate entrepreneurship, and students' entrepreneurial disposition and intentions. Men and women differ significantly in nine of the sixteen comparisons.

Table 7: University, Disposition, and Intentions

Factor	Country	Male		Female			
		M	*SD*	*M*	*SD*	*F*	*p*
Skills included in curriculum	US	2.54	0.892	2.17	0.911	13.022	.000
	China	2.52	0.735	2.53	0.847	0.210	.811
	Turkey	2.52	0.879	2.77	0.780	8.432	.000
	Belgium	1.80	0.757	1.92	0.742	2.618	.106
University stimulation	US	2.45	0.667	2.29	0.675	4.254	.040
	China	2.58	0.731	2.61	0.731	0.173	.841
	Turkey	2.39	0.856	2.39	0.956	0.001	.973
	Belgium	2.07	0.671	2.23	0.756	5.346	.021
Entrepreneurial disposition	US	4.64	1.402	3.72	1.557	29.587	.000
	China	3.75	1.466	3.67	1.350	0.180	.836
	Turkey	5.24	1.335	4.40	1.229	9.311	.000
	Belgium	4.00	1.398	3.61	1.319	7.138	.008
Entrepreneurial intentions	US	1.42	0.813	0.92	0.803	29.201	.000
	China	1.34	0.872	1.03	0.713	2.983	.049
	Turkey	1.93	0.871	1.37	0.785	8.201	.000
	Belgium	1.13	0.768	0.95	0.822	4.855	.028

Skills in curriculum—Chinese and Belgian males and females have similar perceptions about the extent to which their curricula provide knowledge to prepare them to start businesses, with average scores somewhere between a little and some. However, there are significant differences in the US and Turkey.

University stimulation—US and Belgian males are significantly more positive than females about the extent to which their universities stimulate

students to start businesses, with average scores between a little and some, while Chinese and Turkish students do not differ significantly by gender.

Entrepreneurial disposition—in three of four countries males had significantly greater entrepreneurial disposition (their internal sense of how entrepreneurial they are). There was no gender difference in China.

Entrepreneurial intentions—in all four countries men had significantly higher levels of intention than did women.

Discussion and Implications

The analyses generally support our model. They show substantial differences between men and women. Culture affects students' intentions, women have lower levels of entrepreneurial intentions, motives generally have a positive influence on intentions, barriers have a negative influence, men appear influenced by motives, and women appear influenced by barriers.

Gender, Culture, Perceptions, and Intentions

The regression test of the full model showed that gender, cultural dimensions, and motive and barrier perceptions are significantly related to entrepreneurial intentions. Further, in separate regressions by country and gender, the model is significant in seven of eight instances (Chinese women were the only group for which the model did not have any significant explanatory power). In most cases, the significant factors were psychological or intrinsic ones. Belgian males were the only group for which the extrinsic profit-status motive was significant. Males in three countries (the U.S, China, and Turkey) saw the extrinsic barrier of economic climate/entrepreneurial competencies as significant. When other barriers and motives were significant, they were intrinsic—desire for independence or to create something, lack of self-confidence, and risk-aversion. Self-confidence or risk-aversion barriers were significantly related to women's entrepreneurial intentions in three of four countries.

In other research, Kew et al. (2013) find that teens and young adults are less likely to believe in their entrepreneurial skills in Asia, Europe, and the United States (the regions represented in our study). Those authors also find that fear of failure is important—35-45% of the youths in those three regions say that fear of failure would prevent them from starting a business

(Kew et al., 2013: p 35). Unlike our study, Kew et al. did not assess the impact of gender on responses.

Barriers and Motives

For barriers, as shown in the ANOVA, there is a uniform difference across three countries (Turkey, the US, and Belgium)—in each case, women perceive each barrier as significantly more important than do men. In all fifteen barrier gender comparisons, women rate barriers higher. Further, the regression standardized beta (β) scores show that the impact of barriers is greater for women. More women believe barriers matter, and they believe barriers matter more, except in China, where there are no significant gender perception differences.

For motives, the results are different. When men and women differ, they differ on the psychological/intrinsic motives for entrepreneurship, not the material/extrinsic ones. Women rate intrinsic motives as stronger. Across countries, there are no gender differences in the importance of the profit/status motive. In Belgium, independence matters more to women, in Turkey personal development matters more to women, and in Turkey and Belgium professional dissatisfaction matters more to women. In all countries, the creation motive is significantly more important to women, and it is the only motive/barrier on which Chinese women differ.

Implications for Future Research

First, results in China unique—there are no significant gender differences on many dimensions, and the motive and barrier perceptions of Chinese women have no relationship to intentions. Chinese males seem more likely to pursue entrepreneurship but have no greater entrepreneurial disposition. Do men overstate their entrepreneurial intentions? Do other factors limit women's entrepreneurial intentions even when they have entrepreneurial disposition? Further gender research in China is needed.

Second, men and women perceive barriers and motives differently—do women overrate barriers or do men underrate them? Do men underrate intrinsic motives? New research is needed on these differences, especially their sources and their impact on intentions and behavior.

Third, psychology deserves a role—this paper began by noting the scarcity of cross-cultural research on gender, perceptions, and intentions. We need research to connect gender, culture, education, and psychology.

Implications forEntrepreneurship Education

Our study suggests that addressing gender differences may help resolve the continuing debate about the effectiveness, content, and purpose of entrepreneurship education (Dhaliwal, 2010; Fayolle, 2008; Giacomin et al., 2011; Hoelscher, 2012; Jose and Orazio, 2012; Katz, 2003; Khadija, Usman, and Mohsin, 2012; Kirkwood, 2009; Lo, Sun, and Law, 2012; Nabi, Holden and Walmsley, 2010; Packham, Jones, Miller, Pickernell and Brychan, 2010; Peterman and Kennedy, 2003; Petridou, Sarri and Kyrgidou, 2009; Wu and Wu, 2008; Yordanova and Tarrazon, 2010).

Education should focus more on the psychology of barriers. Intrinsic and psychological factors affect student perceptions (especially for women), but university education focuses on knowledge and specific skills, not explicitly on students' psychological understanding and confidence. Psychological and social skills are crucial for entrepreneurs (Taatila, 2010), so perhaps developing self-reliant students should be a central purpose of entrepreneurship education (Van Gelderen, 2010). To us, this seems more important than technical skills.

Education should emphasize intrinsic motives. Although women care more than men about intrinsic motives, this does not lead to an increase in female entrepreneurial intentions. Perhaps education should find ways to emphasize the value of intrinsic motives more than it apparently does.

Education should address cultural differences, for those differences affect both men and women. For example, education in a culture which does not value individuality should address the psychological and practical conflicts which an entrepreneurially-minded student is likely to face. How can we give all students, male and female, a better understanding of their own culturally-influenced thinking?

By focusing on the impact of gender and culture, entrepreneurship education is likely to raise students' entrepreneurial intentions, increase the likelihood that students will actually pursue entrepreneurship, and improve their chances of success and satisfaction.

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Preduzetnik u nastajanju: Pol, kultura i percepcije

A P S T R A K T

Procenjivali smo polne razlike kod 1526 preduzetnika (studenata) u nastajanju, u četiri zemlje, sa ciljem testiranja modela preduzetničkih namera uz uključivanje polnih i kulturnih aspekata, kao i percepcija o preduzetničkim motivima i preprekama. Za razliku od prethodnog istraživanja usmerenog na preduzetnike u fazi preživljavanja, mi proučavamo ljude koji su na samom početku preduzetničke karijere.

Model, prema našim nalazima, pruža značajnu podršku hipotezama o uticaju pola, kulture i percepcija o motivima i barijerama. Postoje značajne razlike između muškaraca i žena. Kultura utiče na namere studenata, žene imaju niži nivo preduzetničkih namera, motivi uglavnom imaju pozitivan uticaj na namere, prepreke imaju negativan uticaj, muškarci su više podložni uticaju motiva, dok su žene više podložne uticaju prepreka.

Rezultati u Kini predstavljaju interesantne izuzetke u analizama i sugerišu smernice za buduća istraživanja specifična za tu zemlju. U celini, rezultati istraživanja sugerišu pravce za naredna istraživanja o preduzetničkim namerama. Između ostalog, diskutovali smo o implikacijama studije na preduzetničko obrazovanje .

KLJUČNE REČI: *pol, kultura, studenti, preduzetništvo, preduzetničke namere, preduzetničko obrazovanje, motivi, barijere*

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