

The GUESSS 2018 National Report: Entrepreneurial Evidence of the Japanese University
Students

March 2020

Noriko Taji, Faculty of Business Administration, Hosei University, Japan

Tomoyo Kazumi, School of Commerce, Senshu University, Japan

Yuki Tamai, Faculty of Urban Management, Fukuyama City University

Makoto Fujimura, Faculty of Human Relations, Fukuoka Jo Gakuin University

Acknowledgments

In addition to expressing our gratitude toward the teachers from 47 universities and graduate schools and the secretaries of Hosei and Senshu Universities who have worked tirelessly to conduct the survey and collect the data. Also we would like to thank Dr. Emi Makino of Hiroshima University in particular support to develop questionnaires for Japanese survey.

Abstract

By comparing Japanese university students with international students, we found that the former more likely prefer to be employees of larger companies than the latter (36.4% and 23.8%, respectively). We found that 38.2% of the students in all participating countries aspire to become entrepreneurs within five years of completing their graduation. Nascent entrepreneurs comprise 21.9% of the international student responses and 12.8% of the Japanese student responses. Additionally, 8.8% and 1.3% of the international and the Japanese students, respectively, have already started a business. Furthermore, Japanese students scored less than the international average for items such as entrepreneurship and self-assessed management ability. Finally, the results of the covariance structure analysis of the influence of entrepreneurship education revealed that the “university environment” directly increased the level of entrepreneurship, and possessing heightened “confidence in skills and abilities” increased students’ willingness to start businesses.

1. Introduction

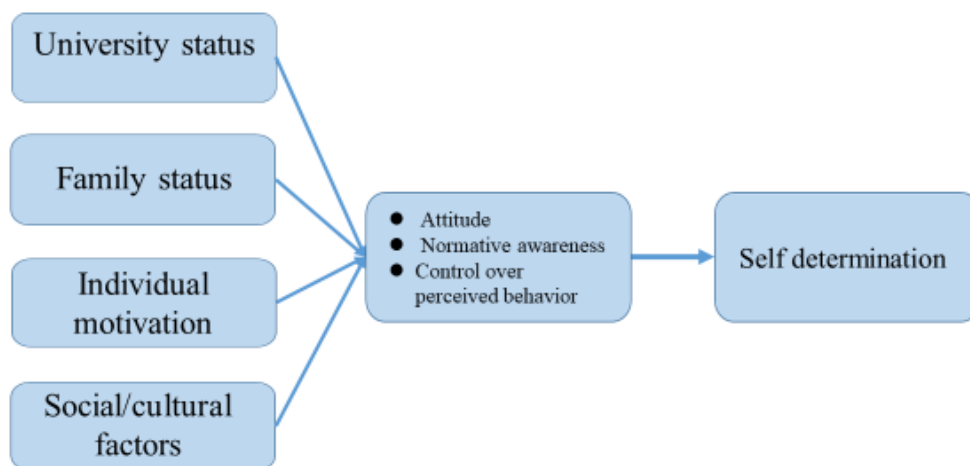
1.1 Overview of Global University Entrepreneurial Spirit Students’ Survey (GUESSS)

GUESSS, initiated in 2003, is organized by the Institute for Small and Medium Enterprises and Entrepreneurship Activity at the University of Saint-Gallen, Switzerland, and surveys entrepreneurship awareness among university undergraduate and graduate students. The 2018 survey is the eighth survey since the commencement of GUESSS. In total, 208,636 valid responses were received from 3,191 universities in 54 countries, which is the highest number of participating countries, institutions, and responses since the survey’s commencement. This

survey continuously collects data on student career choice intention and entrepreneurship and provides useful information to universities, students, supporters, policy makers, and researchers.

This study's framework is based on the theory of planned behavior (Ajzen 2002). According to Ajzen (2002), attitude, subjective norms, perceived behavioral control, and self-efficacy influence behavioral intentions and aid in regulating behaviors. It also uses this framework to identify trends in the occupational choices in entrepreneurship (among founders, employees, researchers, public servants, those who inherit businesses, etc.) and examine the relationship between motivation, family context, and social and economic institutions. Figure 1 depicts the framework of the survey.

Figure 1: Basic survey framework of GUESSS



Source: Siger, P., Fueglistaller, U., Zellweger, T. (2014) "International Report of the GUESSS 2013/2014" p.7

1.2 Total number of responses on the basis of participating countries

Table 1 lists the participating countries and the total number of responses for the GUESSS 2018.

Table 1: Number of valid responses on the basis of participating countries (GUESSS 2018)

国	大学数	サンプル数	比率	国	大学数	サンプル数	比率
1 Albania (ALB)	5	518	0.25%	28 Kosovo (KOS)	4	683	0.33%
26 Jordan (JOR)	10	979	0.47%	29 Lebanon (LBN)	1	40	0.02%
3 Argentina (ARG)	26	2,691	1.29%	30 Liechtenstein (LIE)	1	338	0.16%
4 Australia (AUS)	1	77	0.04%	31 Lithuania (LTU)	24	1,059	0.51%
5 Austria (AUT)	33	1,999	0.96%	32 Mexico (MEX)	53	5,173	2.48%
6 Belarus (BLR)	15	504	0.24%	33 New Zealand (NZL)	2	1,924	0.92%
7 Brazil (BRA)	143	20,623	9.88%	34 Norway (NOR)	10	56	0.03%
8 Chile (CHI)	30	7,704	3.69%	35 Pakistan (PAK)	17	2,389	1.15%
9 China (CHN)	2,010	18,685	8.96%	36 Panama (PAN)	8	3,564	1.71%
10 Colombia (COL)	65	15,851	7.60%	37 Peru (PER)	1	121	0.06%
11 Costa Rica (CRC)	85	7,359	3.53%	38 Poland (POL)	8	332	0.16%
12 Czech Republic(CZE)	9	1,254	0.60%	39 Portugal (POR)	26	4,178	2.00%
13 Ecuador (ECU)	8	3,702	1.77%	40 Republic of Korea (KOR)	19	832	0.40%
14 El Salvador (ESA)	11	641	0.31%	41 Republic of North Macedonia (MKD)	6	398	0.19%
15 England (ENG)	6	465	0.22%	42 Russia (RUS)	15	2,851	1.37%
16 Estonia (EST)	26	1,303	0.62%	43 Saudi Arabia (KSA)	16	1,641	0.79%
17 Finland (FIN)	16	181	0.09%	44 Sierra Leone (SLE)	11	332	0.16%
18 France (FRA)	7	230	0.11%	45 Slovakia (SVK)	17	4,868	2.33%
19 Germany (GER)	25	10,082	4.83%	46 Slovenia (SLO)	6	564	0.27%
20 Greece (GRE)	32	1,157	0.55%	47 South Africa (RSA)	16	3,515	1.68%
21 Hungary (HUN)	24	9,667	4.63%	48 Spain (ESP)	76	33,278	15.95%
22 Indonesia (IND)	7	1,279	0.61%	49 Switzerland (SUI)	69	9,784	4.69%
23 Ireland (IRL)	12	1,408	0.67%	50 Turkey (TUR)	25	693	0.33%
24 Italy (ITA)	21	7,299	3.50%	51 Ukraine (UKR)	25	722	0.35%
25 Japan (JAP)	49	4,150	1.99%	52 United Arab Emirates (UAE)	5	931	0.45%
26 Jordan (JOR)	29	4,564	2.19%	53 Uruguay (URY)	3	509	0.24%
27 Kazakhstan (KAZ)	20	3,425	1.64%	54 USA	2	64	0.03%
				Total	3,191	208,636	100%

Source: Created by the author

1.3 Methodology in Japan

The questions in GUESSS are translated into multiple languages to ensure that the survey can be conducted worldwide. Furthermore, we added a unique question to the Japanese survey to gauge the effects of entrepreneurship education programs at science and technology universities, and Hosei and Senshu Universities conducted the Japanese survey.

The questionnaire was administered through a central server, and the URL of the survey site was sent through emails to the students of the participating universities, requesting their participation. This web survey was conducted in Japan between October 2018 and January 2019. As procuring responses from students was difficult when contacting them through email or social media, it was important to reach out directly. Hence, flyers were created and sent to

students who could assist with conducting the survey, requesting their fellow students to follow-up, distribute flyers directly, and generally promote the survey. Several responses were procured by having these students make inquiries to other students on the spot during classes and record their responses with a smartphone.

We collected 4,150 valid responses, which was almost three times the amount of the previous surveys. Table 2 represents the participating universities and the number of responses.

Table 2: Number of valid responses on the basis of Japanese universities

University Name	n	%	University Name	n	%
Senshu	722	17.4%	Takachiho	25	0.6%
Ritsumeikan	608	14.7%	Yokohama City	24	0.6%
Fukuyama City	360	8.7%	Fukuoka	23	0.6%
Aichi Gakuin	318	7.7%	Nagoya Univ of Commerce	21	0.5%
Hosei	245	5.9%	Tokyo	19	0.5%
Tokyo Keizai	223	5.4%	Yamagata	19	0.5%
Tokyo Univ of Science	176	4.2%	Gakushuin	18	0.4%
Musashi	131	3.2%	Kwansei Gakuin	17	0.4%
Osaka Univ of Commerce	114	2.7%	Okayama	15	0.4%
Kansai	113	2.7%	Chuo	14	0.3%
Fukuyama	87	2.1%	Jitsuji	12	0.3%
Hokkaido Univ of Science	71	1.7%	Doshisha Women's U	11	0.3%
Ryukoku	60	1.4%	Otaru Univ of Commerce	10	0.2%
Meiji	57	1.4%	Ochanomizu Women's U	9	0.2%
Osaka City	54	1.3%	Hokkaido	9	0.2%
Tohoku	51	1.2%	Nagoya	8	0.2%
Shizuoka	48	1.2%	Kyoto Women's U	7	0.2%
Tokyo Inst of Technology	42	1.0%	Waseda	7	0.2%
Nihon	40	1.0%	Hiroshima	6	0.1%
Atomi Gakuen Women's U	39	0.9%	Hitotsubashi	5	0.1%
Kyushu	37	0.9%	Gifu	4	0.1%
Fukuchiyama	33	0.8%	Kyoto	3	0.1%
Kobe	29	0.7%	Toyohasi U of Technology	2	0.0%
Setsunan	29	0.7%	Other	147	3.5%
Shiga	28	0.7%	Total	4,150	100.0%

Source: Created by the author

2. Attributes of the Japanese respondents

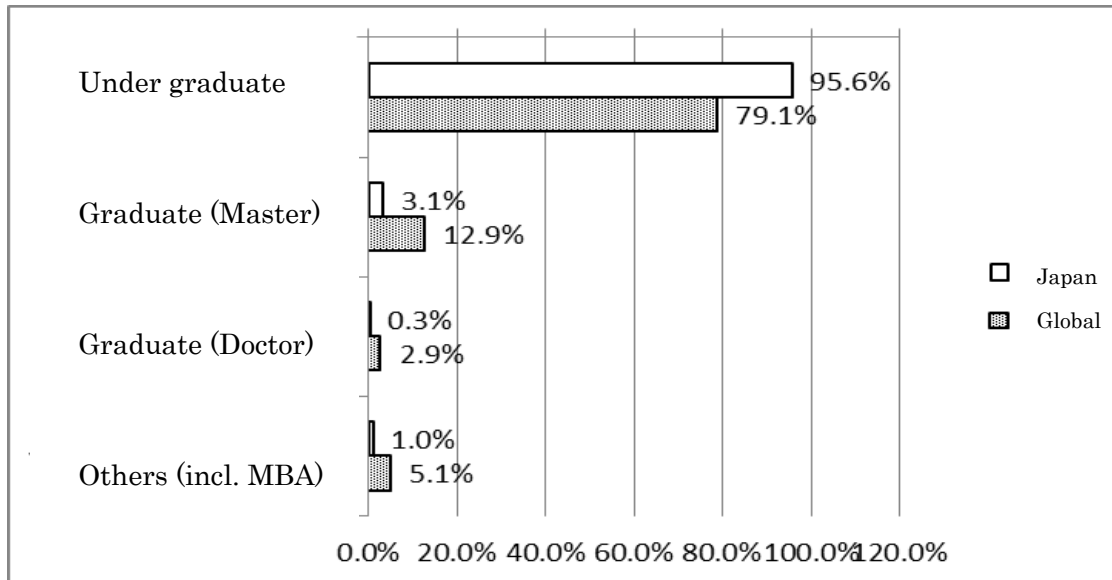
2.1 Gender

In Japan, 41.5% of respondents were women, 58.2% men, and 0.3% did not answer.

2.2 Degree level

95.6% of Japanese respondents were undergraduate students, 3.1% were master's degree, and only 0.3% were doctoral degree. Also 1.0% of respondents belonged to Professional Graduate School or MBA.

Figure 1: Respondents' degree level



2.3 University major

Figure 2 displays the respondents' majors. Unlike the international responses, most of Japanese students with majors in commerce or business administration (72.9%). After that economics (10.4%), social science (3.2%), engineering (2.7%), computer science and IT (1.9%) were continued. This distribution of responses differs significantly from that in the global sample.

2.4 Nationalities

In all, 95.5% of the respondents were ethnically Japanese, and there were some responses from international students from elsewhere in Asia; thus, the diversity of the respondents was low overall (Table 3).

Figure 2: Respondents' Majors

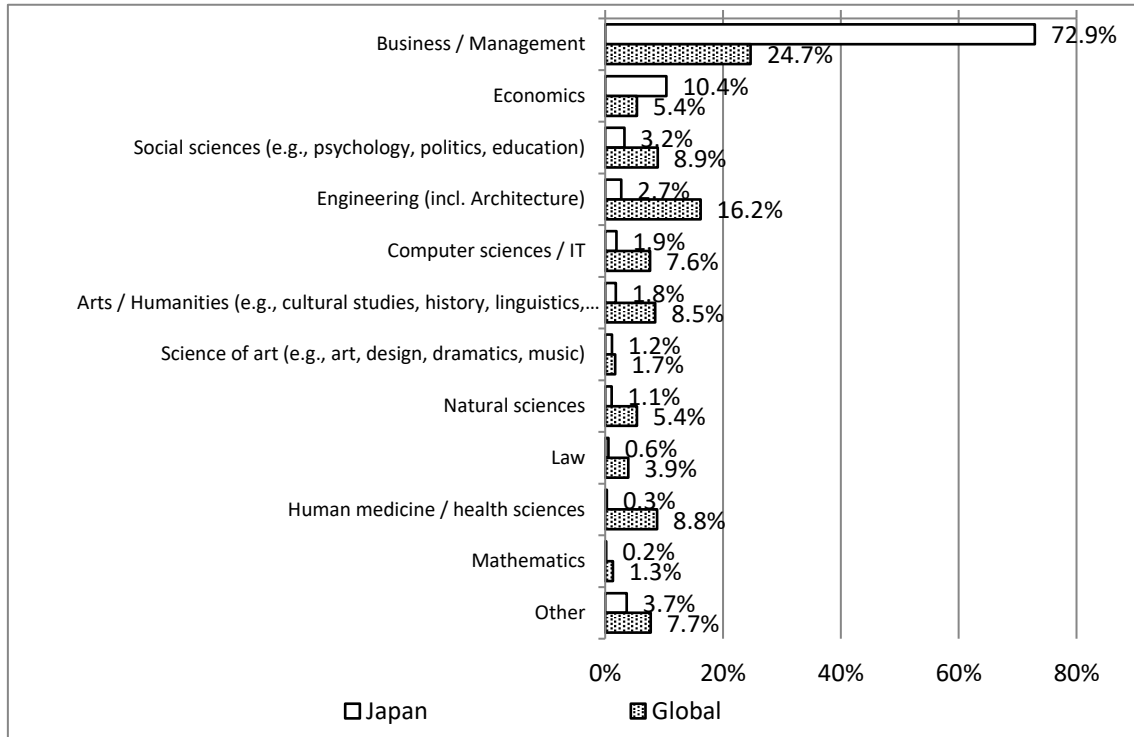


Table 3: Respondents' nationalities in the Japanese survey

Nationality	n	%
Japanese	3,550	95.5%
Chinese	96	2.6%
Korean	23	0.6%
Taiwanese	6	0.2%
Vietnam	11	0.3%
Other	30	0.8%

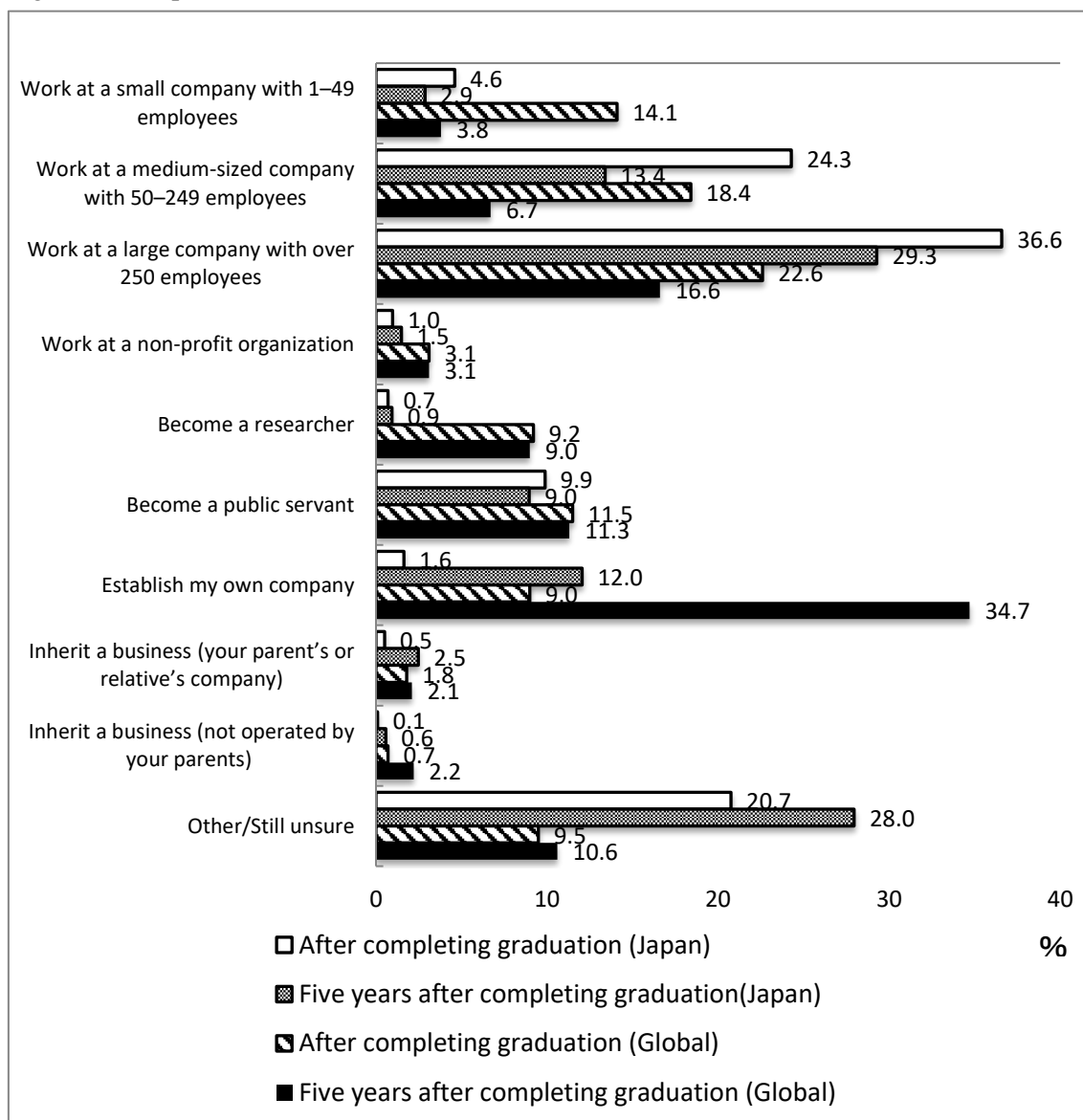
3. Career choice intention

3.1 Career choice after graduation

We asked the respondents where they wanted to work immediately after completing their graduation and five years after completing their graduation. Across all participating countries, 14.9% of respondents preferred working at small companies immediately after completing their graduation, 20.3% preferred working at medium-sized companies, and 23.8% preferred working at large companies; however, the percentage still wanting to work at a company five years after

completing graduation decreased, with 38.2% of the respondents stating that they wanted to be the founder of their own company. Several Japanese respondents wanted to work as company employees, with the majority gravitating toward larger firms: 4.6% at small companies, 24.3% at medium-sized companies, and 36.6% at large companies. At the same time, only 1.6% aspired to establish their own company immediately after completing their graduation, and only 12.0% aspired to do so five years later. Globally, 9.0% aspired to establish their own company immediately after completing their graduation, and 34.7% aspired to do so five years later (Figure 3).

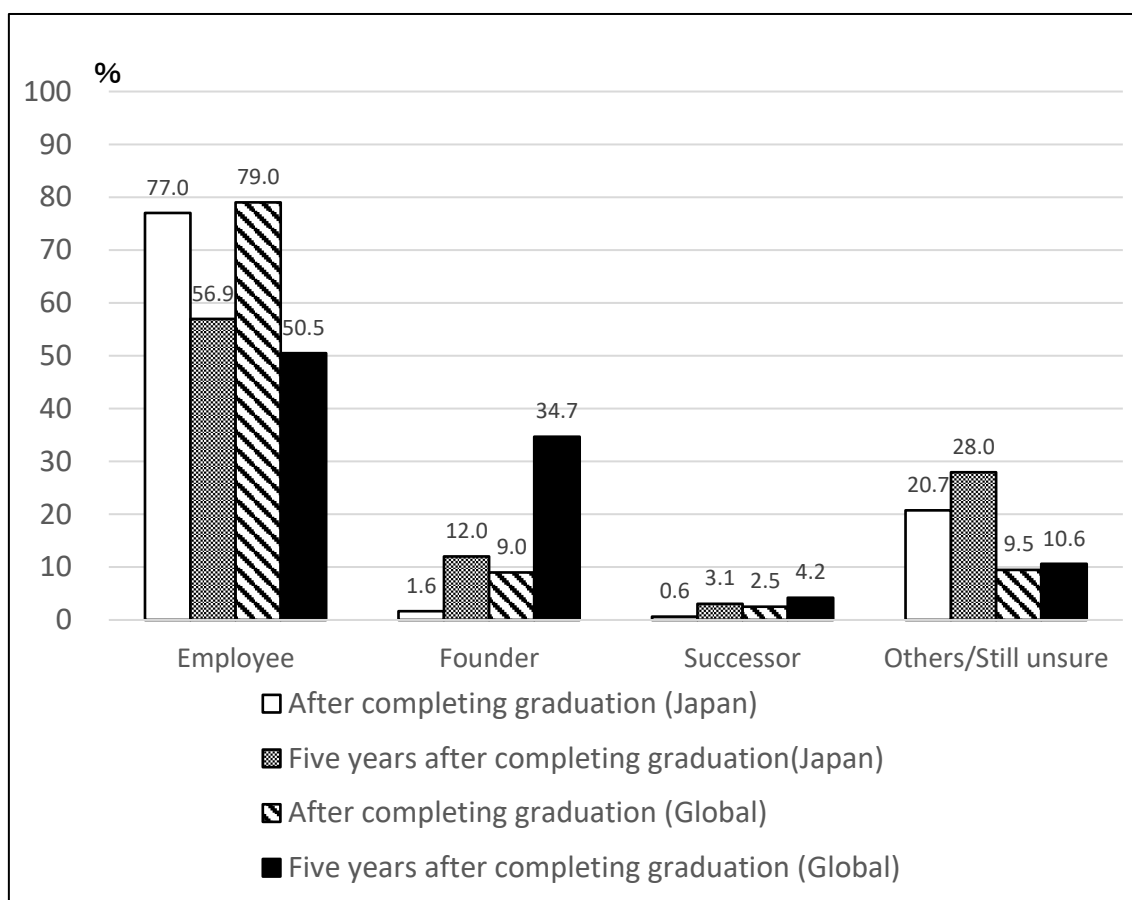
Figure 3: Comparison of career choice intention



3.2 Career choice intention in career groups

When forming three career groups (i.e., employee, founder, and successor in parents' business if existing), Japanese respondents prefer organizational employment both of after completing graduation and five years after. Global respondents also prefer employment directly after graduation, but five years after many then plan to swing to entrepreneurial career path (Figure 4).

Figure 4: Career choice intentions in groups



3.3 Career plan of intentional entrepreneurs

Figure 5 reveals which career path those students who intend to be entrepreneurs right after graduation plan to pursue five years later. Both Japanese and Global respondents most prefer to be entrepreneurs five years after graduation.

The other way round, Figure 6 shows what those students who intend to be an entrepreneur five year after completing graduation plan to do directly after studies. 45.4% of Japanese respondents and 29.3% of global respondents intend to be employees in large company. Only 10.8% (Japanese) or 16.7% (global) respondents want to be an entrepreneur directly after graduation.

Figure 5: The career plan five years after graduation of direct intentional entrepreneurs

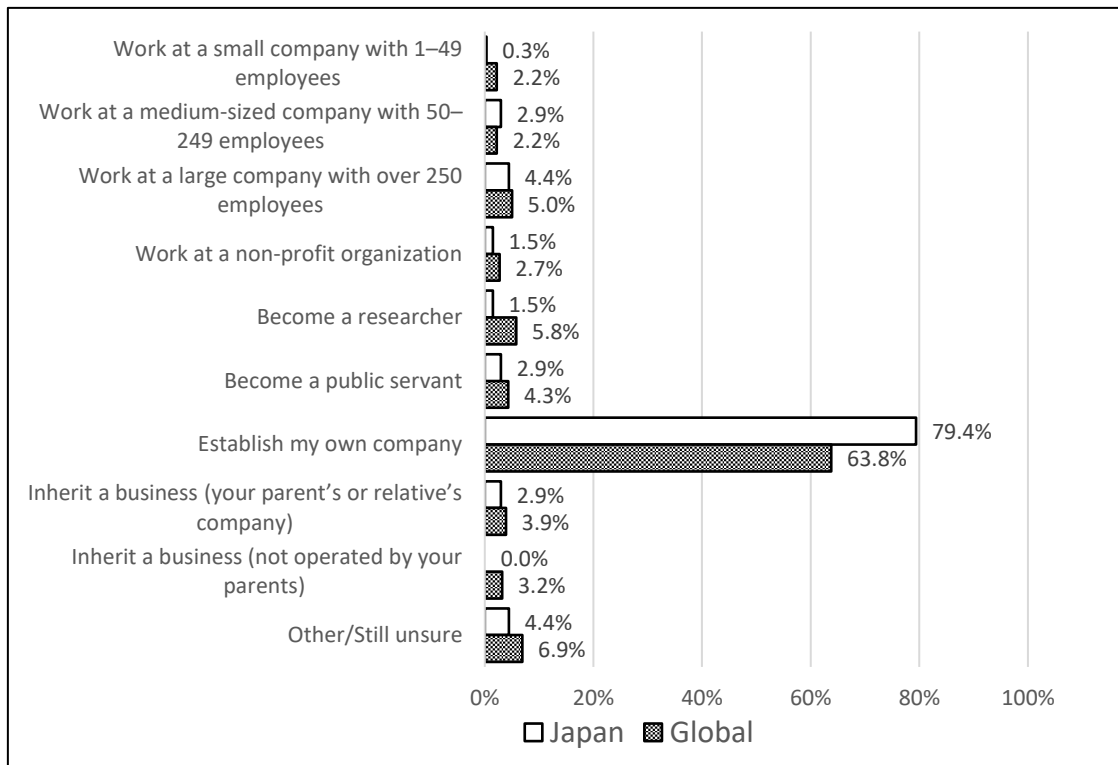
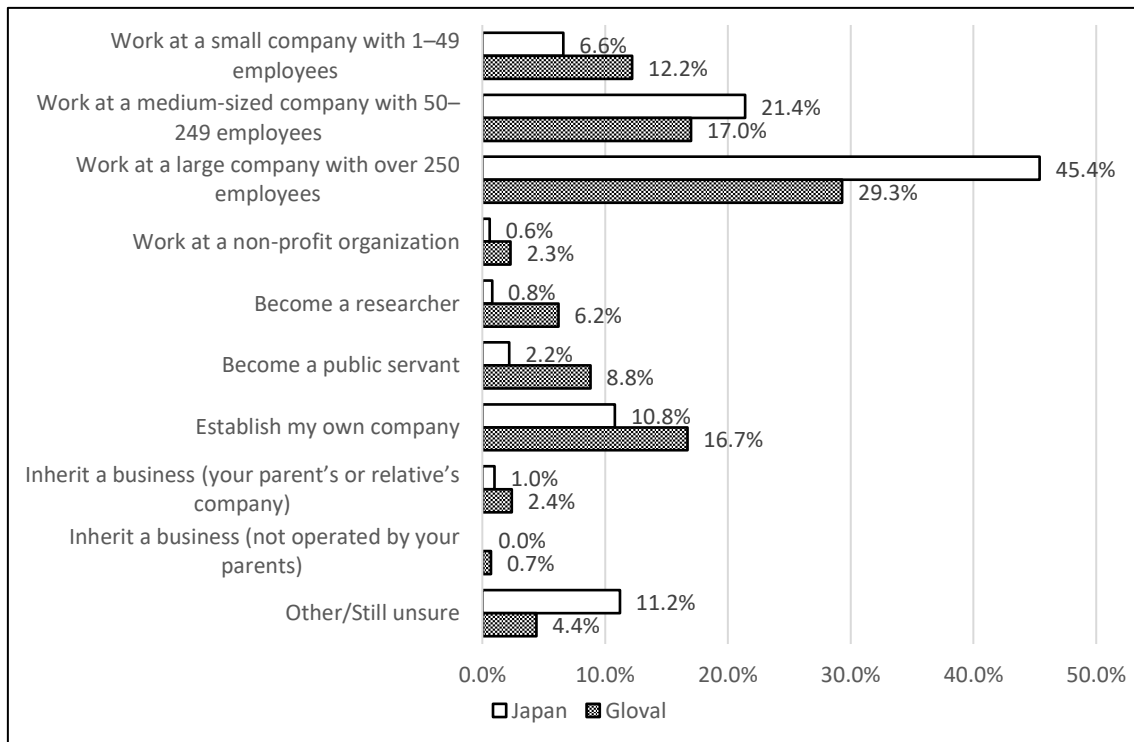


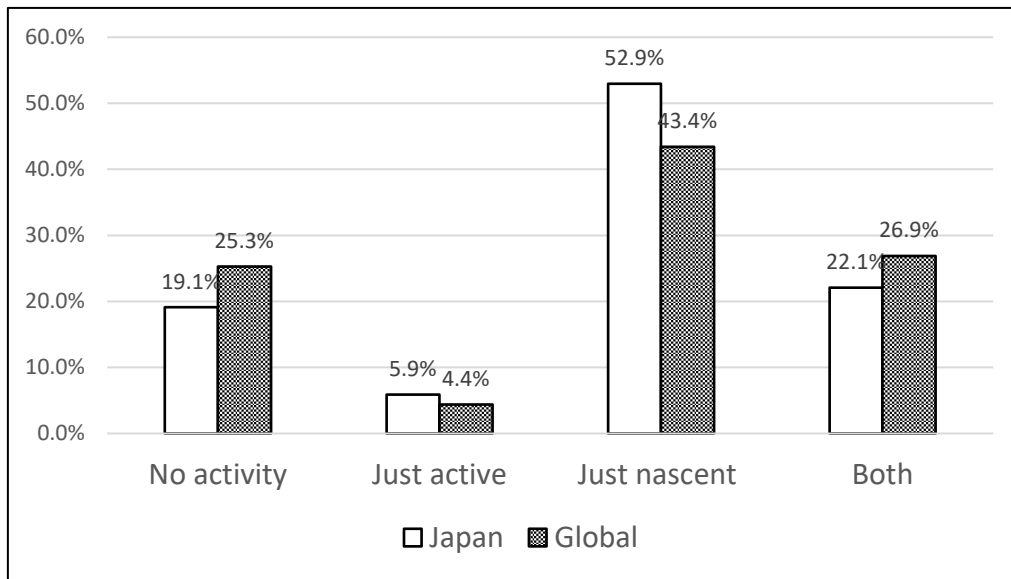
Figure 6: The career plans directly after graduation of the “five years intentional entrepreneurs”



3.4 Entrepreneurial activities of intentional entrepreneurs

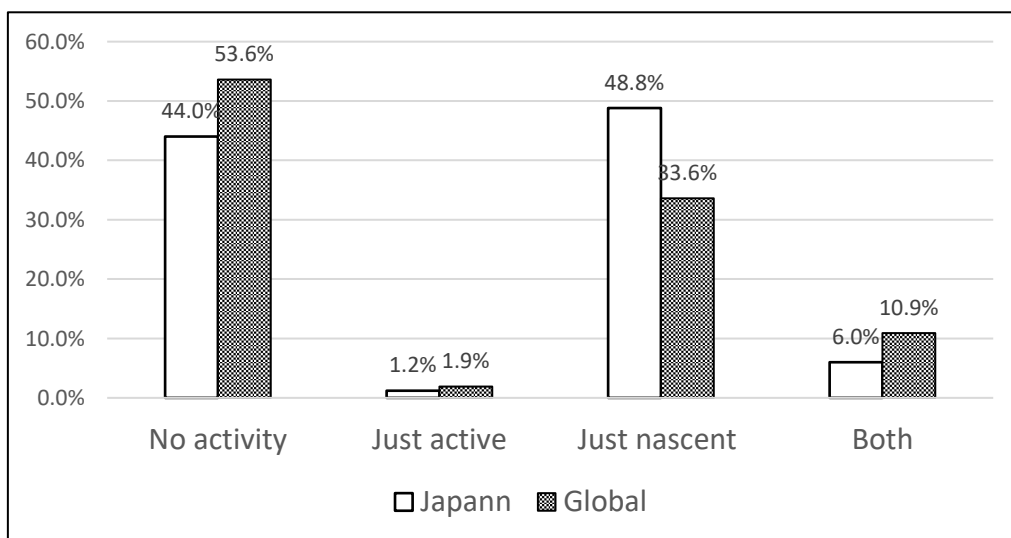
As indicate Figure 7, more than forty or fifty percent of respondents who were intend to be an entrepreneur directly after completing graduation are in the founding process (i.e. they are nascent entrepreneurs), and more than twenty percent of them answered both of currently running their own business and establish own business. Almost twenty or twenty five present “direct intentional entrepreneurs” have not started with any activities yet.

Figure 7: Entrepreneurial activities of “direct intentional entrepreneurs”



For those who intend to be an entrepreneur five years after completing graduation it looks a bit different: almost half of them has not taken entrepreneurial activities as Figure 8.

Figure 8: Entrepreneurial activities of “five years intentional entrepreneurs”



4. Influencing Factors

4.1 The University Context

Respondents were asked if they had attended any entrepreneurship education classes offered by their universities either as compulsory, elective, or special programs. No significant differences were observed between the Japanese and the global students; 46.0% and 55.4% of the former and the latter, respectively, had never attended such a course. However, the percentages of Japanese students who attended compulsory and voluntary entrepreneurship education courses are lower and higher, respectively, than the international students. Also the percentage of global students who completed special program on entrepreneurship was 3.1 point higher than Japanese students (Figure 9).

Figure 9: Completion rate of the entrepreneurship education courses (whole sample)

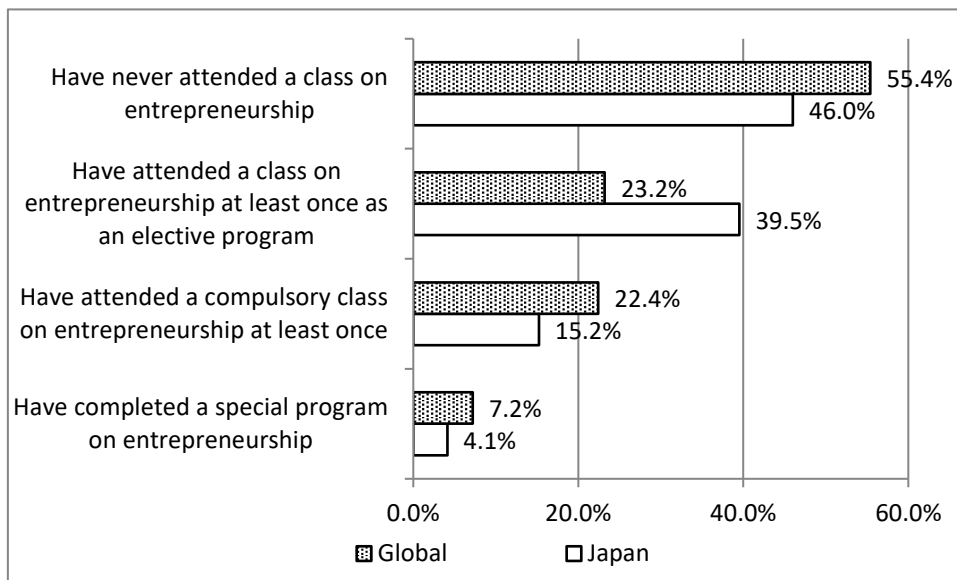
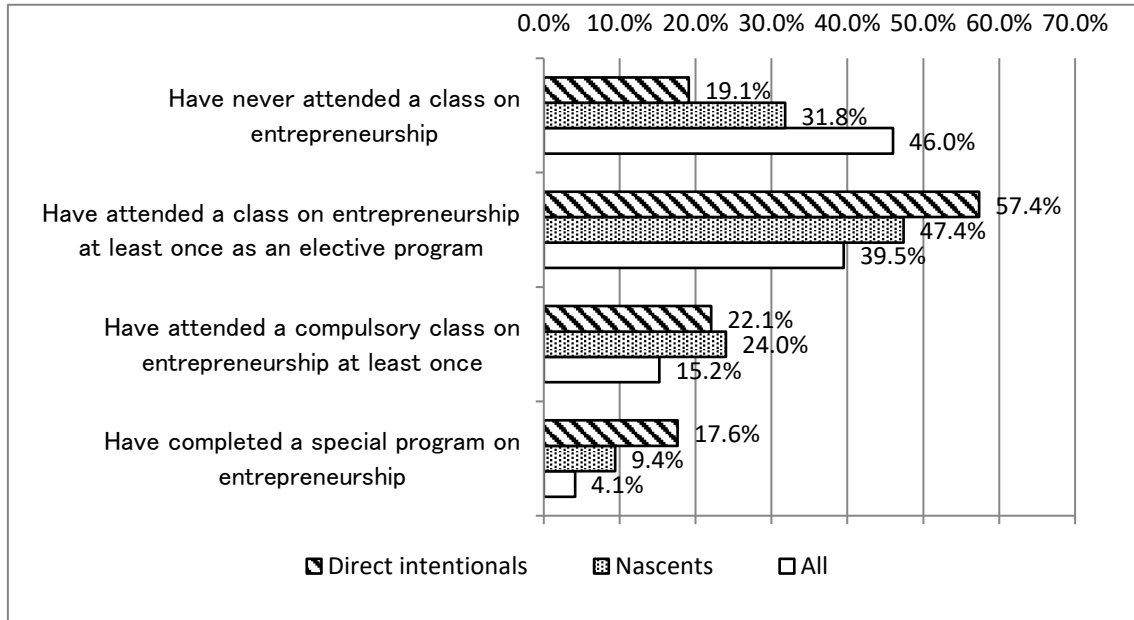


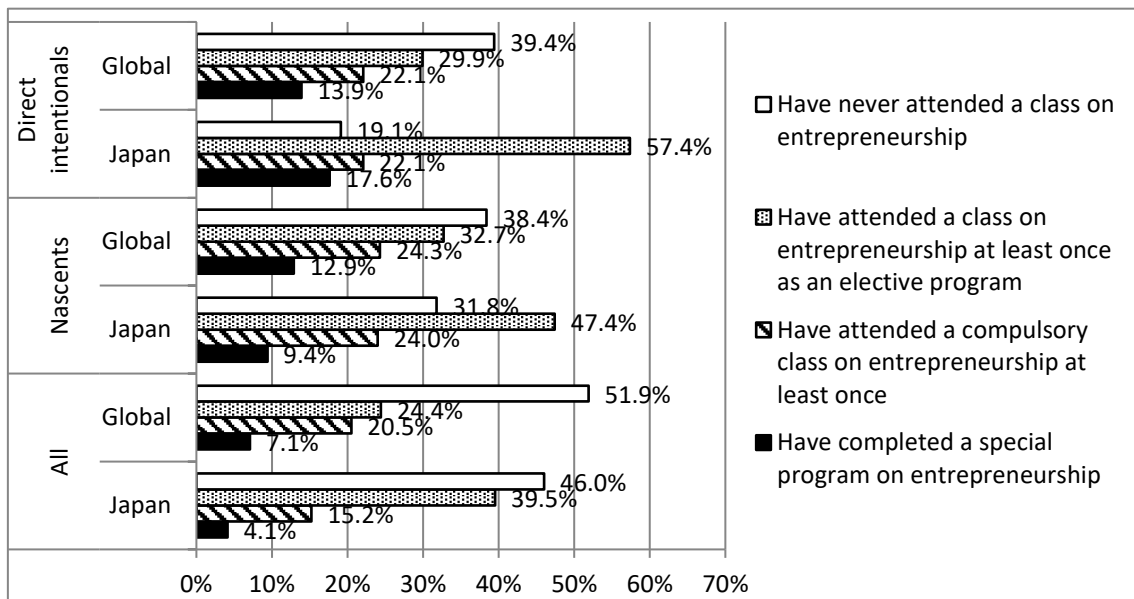
Figure 10 shows over half of “direct intentional entrepreneurs” students have attended at least one elective program on entrepreneurship, and 17.6% of them have completed a special program on entrepreneurship.

Figure 10: Attendance of entrepreneurship education program among deferent students groups (Japan)



As compare with global respondents, more Japanese students have attended elective program on entrepreneurship in spite of entrepreneurial activities (Figure 11).

Figure 11: Attendance of entrepreneurship education program among deferent students groups (Japan and global)



4.2 Entrepreneurship on the basis of respondents' major

A significant difference prevailed in the entrepreneurial intention by major between the Japanese and the global students, and differences also prevailed in entrepreneurial intention by major between both the aspects immediately after completing graduation and five years after completing graduation. In Japan, quite few students were planning to start a business immediately after completing their graduation except those studying commerce or business administration, social science, computer science, economics, or engineering (Figure 12). However, the number of students aspiring to start their own business increased five years after completing graduation. About 12%–15% of the respondents aspired to start a business within five years of completing their graduation, regardless of their major. Notably, engineering students and arts were more willing to start a business than students majoring in business, economics, or computer science. In higher medicine or pharmacology, establishing a clinic or pharmacy would represent a natural career progression, and in the case of arts students, establishing oneself as an independent artist would represent a natural career progression.

Figure 12: Rate of entrepreneurial intention on the basis of the respondents' major (Japan)

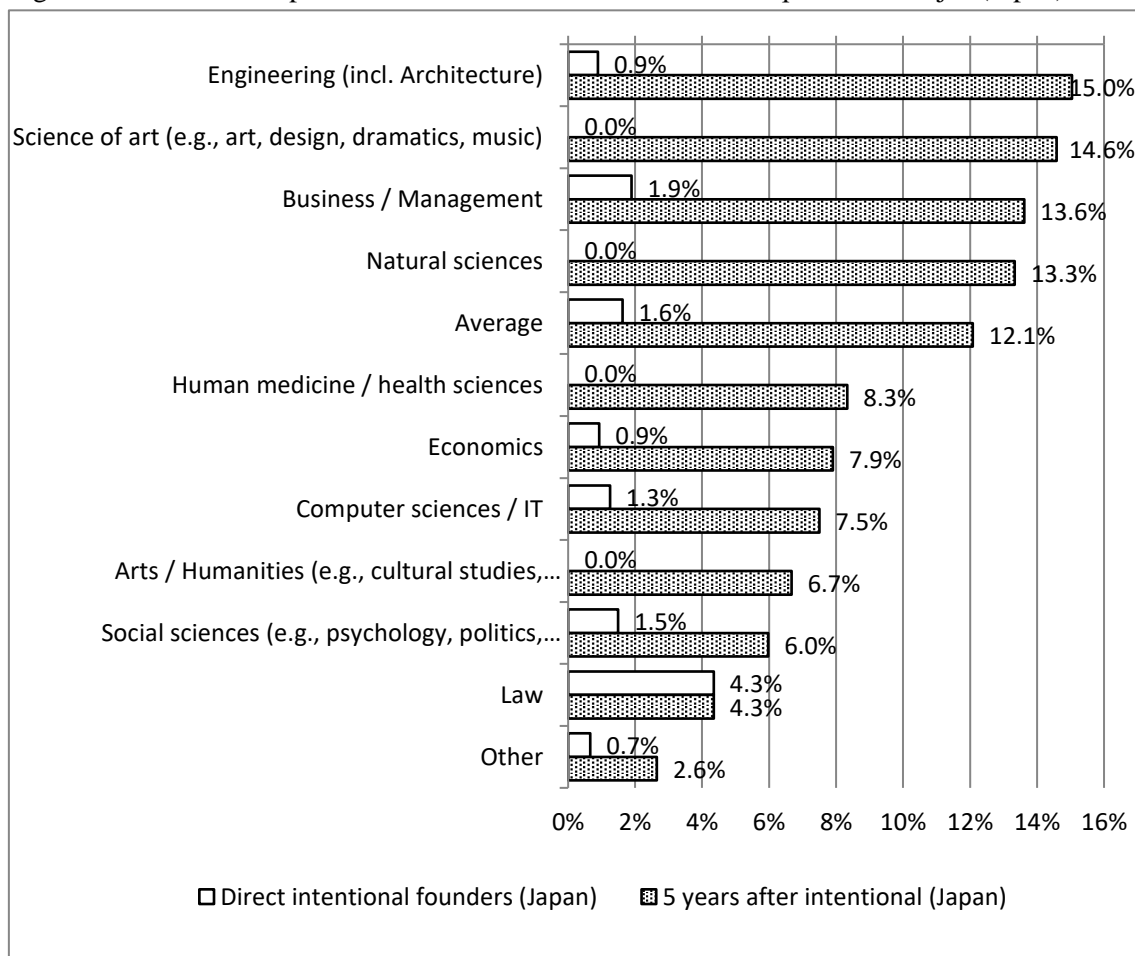


Figure 13: Rate of entrepreneurial intention on the basis of the respondents' major (Global)

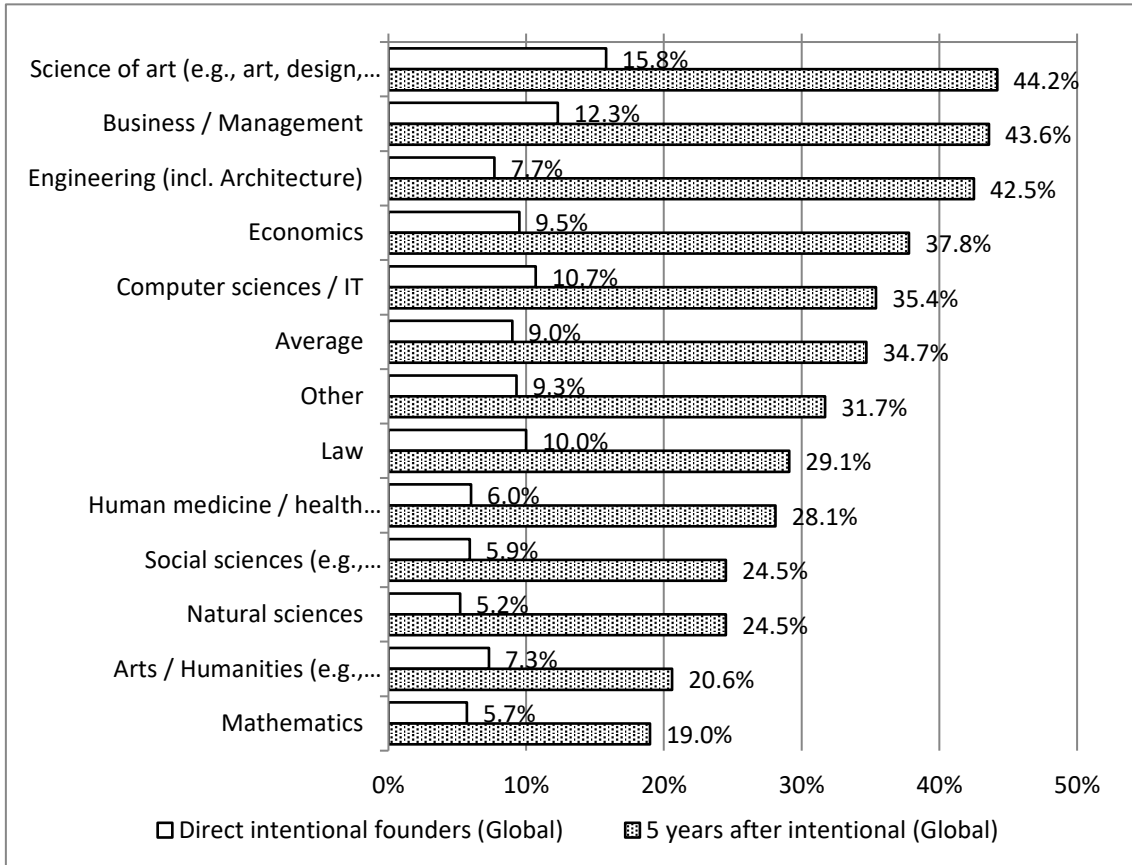


Figure 14 and 15 show the share of active entrepreneurs and nascent entrepreneurs depending on respondents' major. Japanese respondents were significantly low level of entrepreneurial activity except nascent entrepreneurs in the field of science of arts, law, and human medicine.

Figure 14: Nascent and active entrepreneurs depending on majors (Japan)

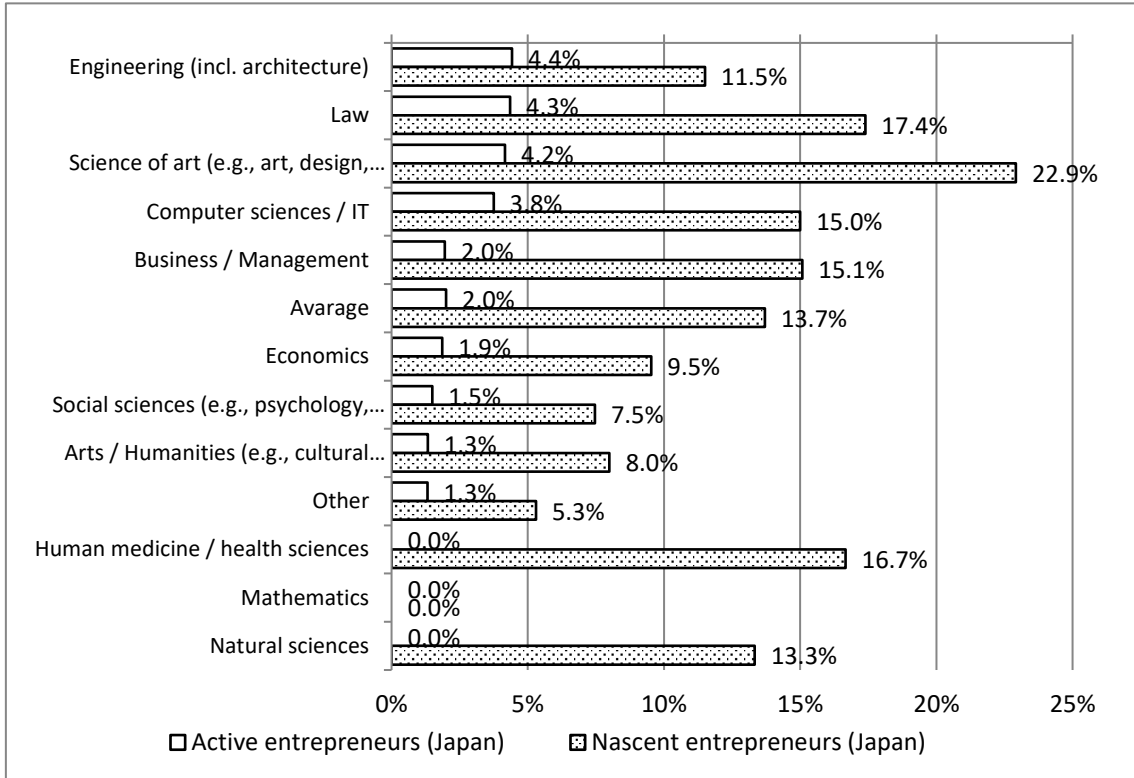
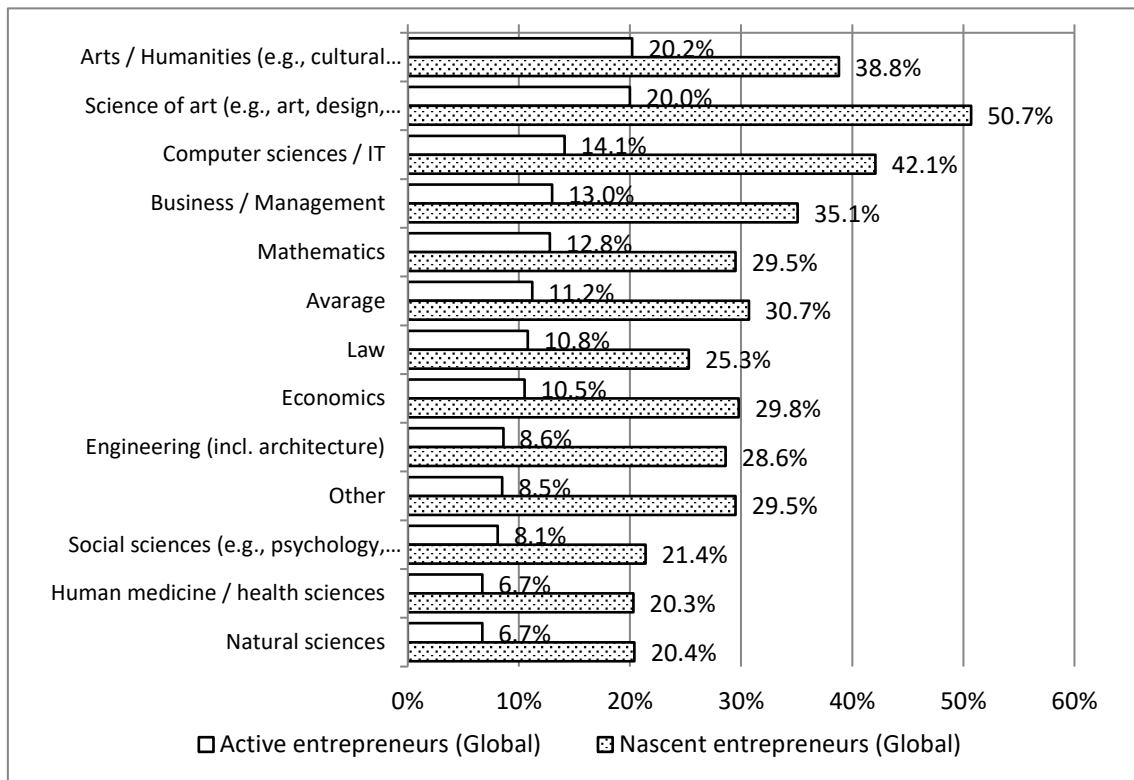


Figure 15: Nascent and active entrepreneurs depending on majors (Global)



4.3 Entrepreneurship on the basis of gender

It was observed that men were more willing to start businesses than women in both the sample sets (Figure 5). The percentage of global respondents from both the genders who would aspire to start a business immediately after completing their graduation (men = 11.2% and women = 7.3%) is almost the same as the percentage of the Japanese respondents who would aspire to start a business five years after completing their (men = 15.9% and women = 6.8%). When looking at the entrepreneurial intention on the basis of gender, global students' gender gap is smaller than Japanese.

Figure 16: Gender differences among entrepreneurial intention and activity (Japan)

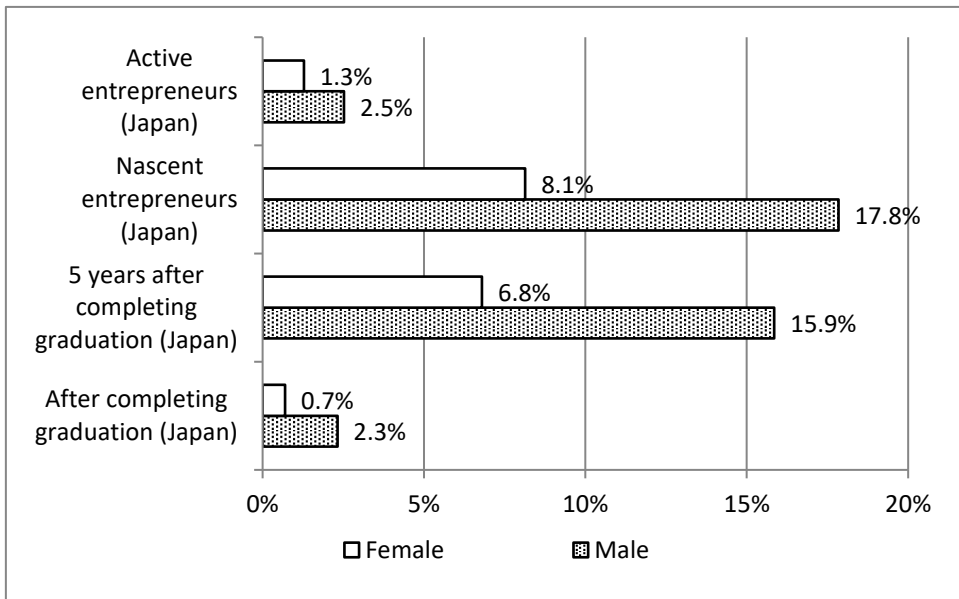
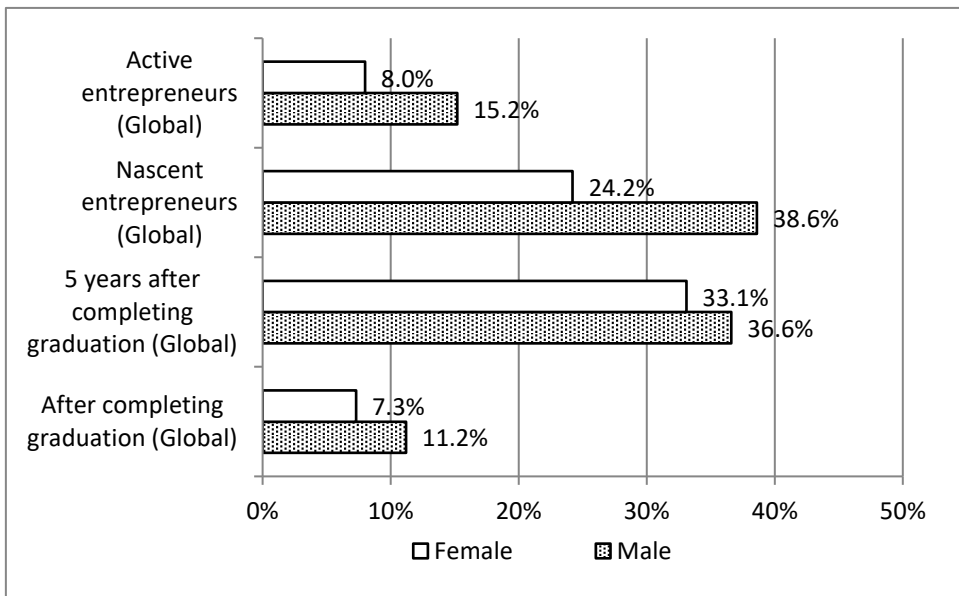


Figure 17: Gender differences among entrepreneurial intention and activity (Global)



4.4 Family context

In all, 76.3% of the global students responded that neither their mothers nor fathers were self-employed; 79.9% was corresponding percent in Japan for the same factor. We could not find out significant differences in having entrepreneurial parents or not between global respondents and Japanese (Table 4).

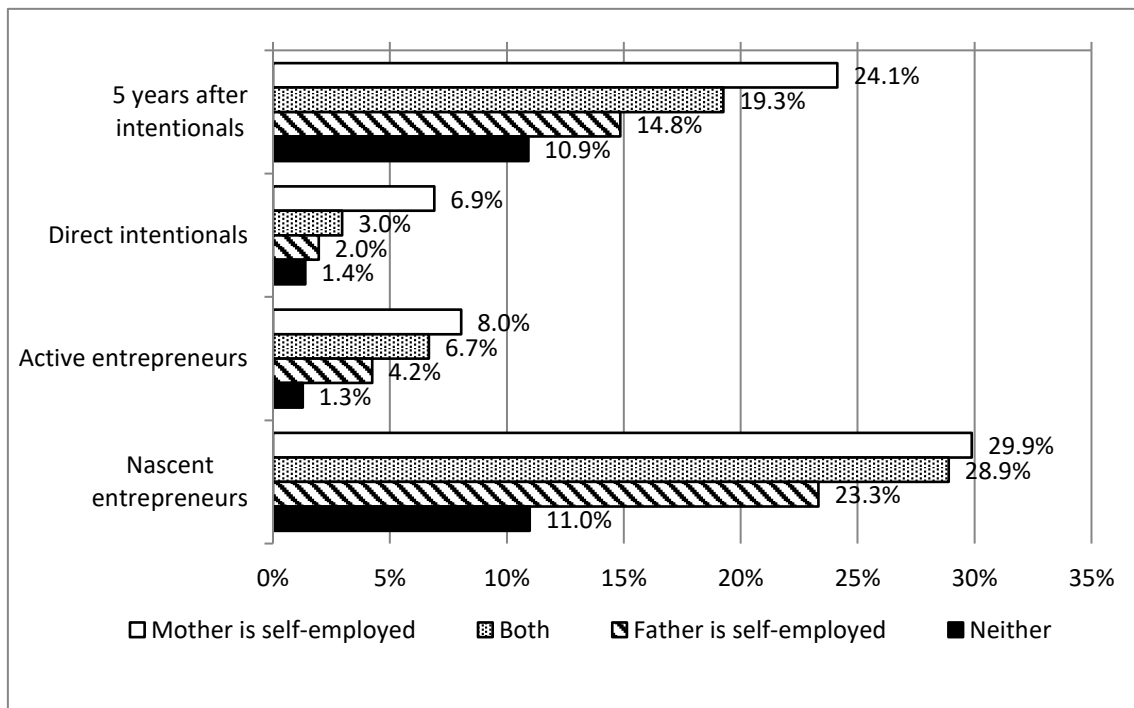
Table 4: Are your parents self-employed?

	Japan	Global
No	79.9%	76.3%

Yes, father	14.8%	13.9%
Yes, mother	2.1%	3.7%
Yes, both	3.3%	6.1%

Figure 18 indicates that respondents whose mother is self-employed were more likely to start a business than respondents without at least one self-employed parent for Japanese respondents. Instead, the effect that a parent's company performance can have on a child's entrepreneurship can be considered.

Figure 18: Share of different types of entrepreneurial intention and activity depending on parents' entrepreneurship (Japan)

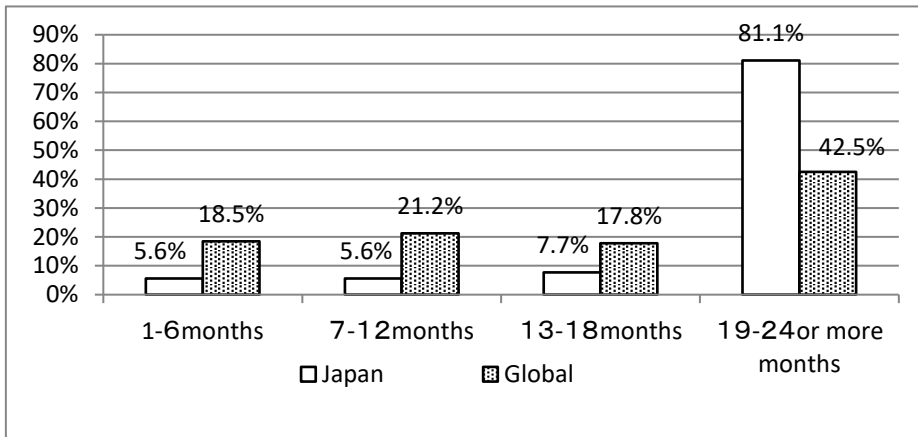


5. Nascent entrepreneurs

5.1 Planned businesses

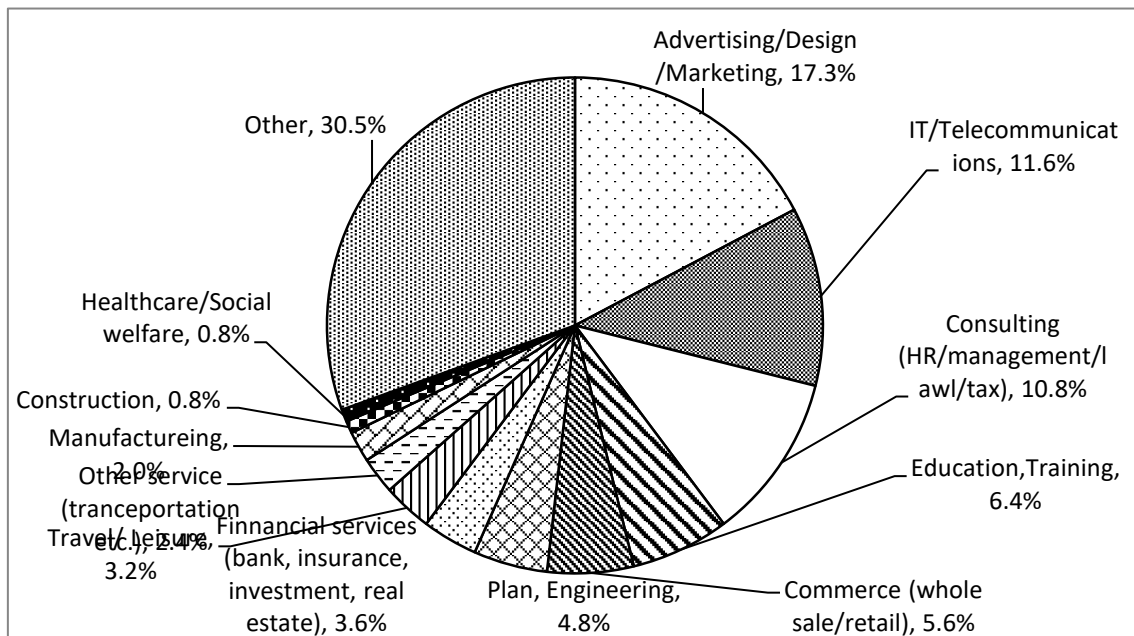
Of the 572 Japanese nascent entrepreneurs, 81.1% stated that they were planning to commence operations beyond 19–24 months in the future. By comparing this aspect to the 42.5% of the global respondents, it is evident that it takes time for new Japanese entrepreneurs to start their own businesses (Figure 19).

Figure 19: Schedules for starting new businesses (Nascent entrepreneurs)



Furthermore, we asked respondents the type of business they planned to run (Figure 20). Advertising/design/marketing firms were the most common, followed by IT/telecommunications, consulting (human resource management/legal/management/tax) companies, education/training companies.

Figure 20: Types of planned businesses (Nascent entrepreneurs/Japan)



In terms of specific entrepreneurial preparations that the Japanese respondents were currently undertaking, “doing nothing” accounted for approximately 42% of all the responses (Figure 21). Moreover, planning to start a business, but not actively preparing for it comported with planning to start a business in more than two years’ time. The percentage of Japanese respondents who stated that they were “gathering information about markets and competitors” (15.0%), “discussing products with strong potential customers” (11.8%), thus, it can be deduced that although several Japanese respondents tended to vaguely consider entrepreneurship, a few of

them were undertaking specific preparation activities.

Figure 21: Preparation activities for entrepreneurship (Japan)

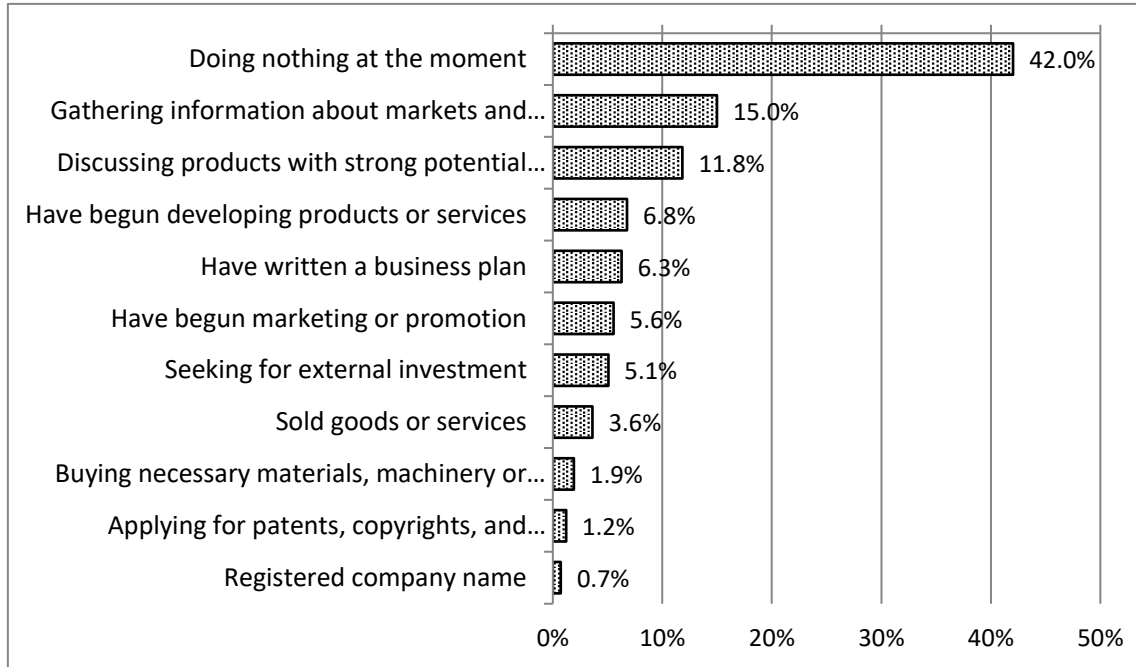
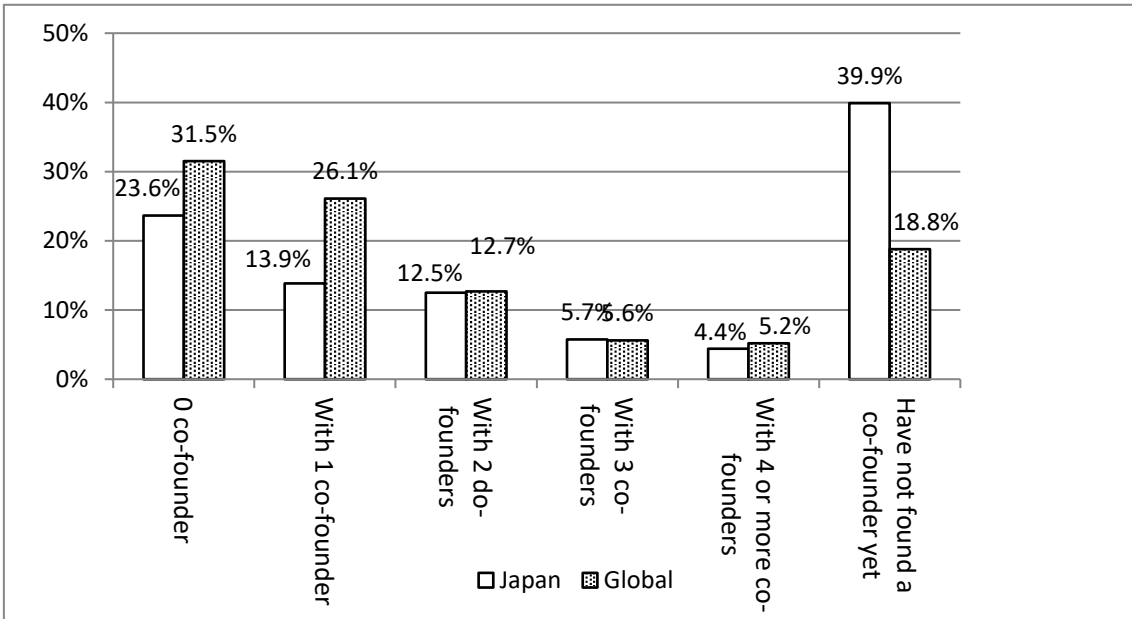


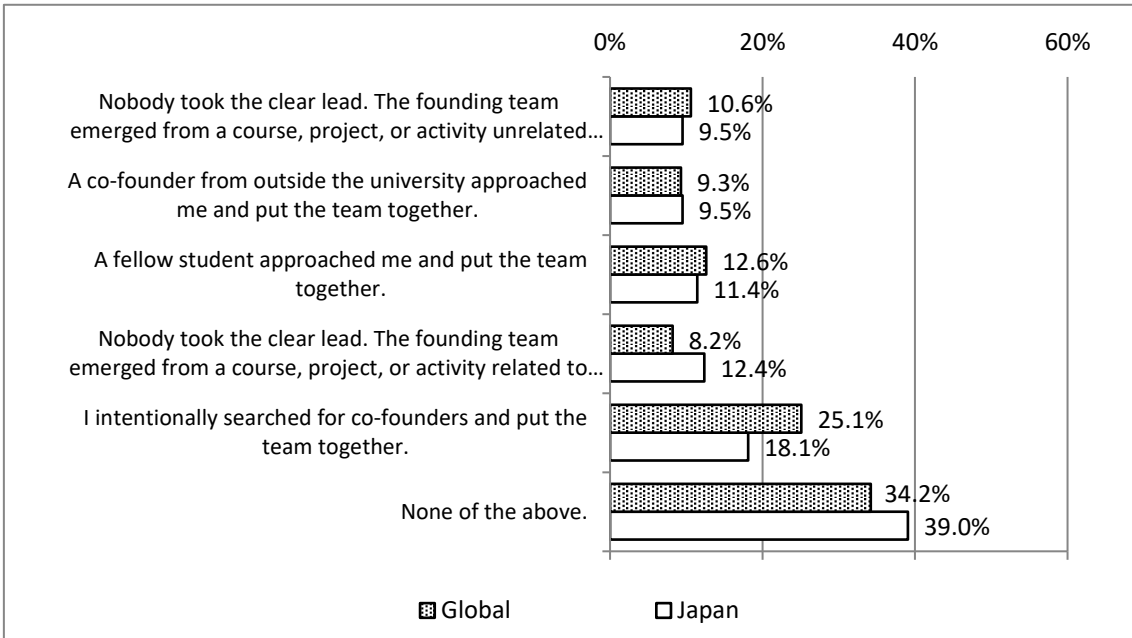
Figure 22 indicates that 23.6% of the Japanese respondents mentioned that they planned to establish a business by themselves; this percentage was not very significant from the percentage of the global respondents, i.e., 31.5%. Moreover, respondents tended to aspire to form teams rather than trying to start businesses on their own.

Figure 22: Number of founders



Entrepreneurs have made effort to find their co-founder(s). 25.1% of global respondents have intentionally searched for co-founder, as Japanese respondents were 18.1%.

Figure 23: How to gathered co-founders



6. Active entrepreneurs

6.1 Operating businesses

The number of employees varies among companies (Figure 24). Most frequent answer was “no employee” (20.0%), and 74.5% of entrepreneurs have stated that they employed less than or equal 5 employees.

Education/training are the most common business areas, followed by advertising/design/marketing, commerce (wholesale and retail) (Figure 25). In all, 38.4% of the businesses were established by a single person in Japan, and 61.6% of the businesses were established by multiple people (Figure 26). Responses to questions designed to gage business performance rating levels on a 7-point Likert scale (1=much worse, 7=much better) score averages revealed considerable variation (Table 5).

Figure 24: Number of employees (Japan)

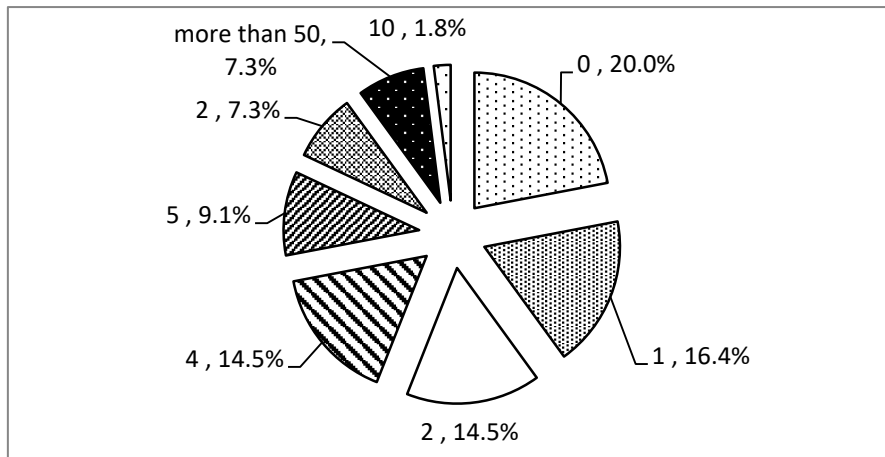


Figure 25: Business area (Japan)

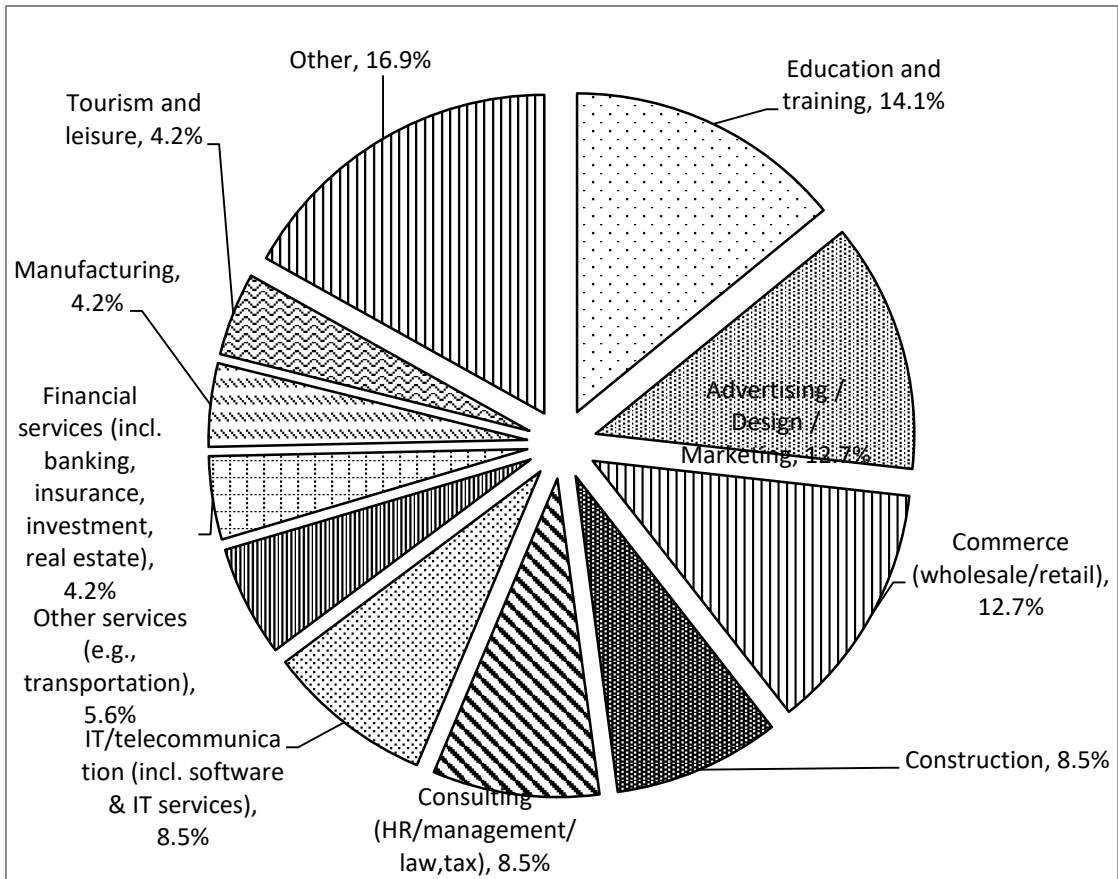


Figure 26: Number of co-founders

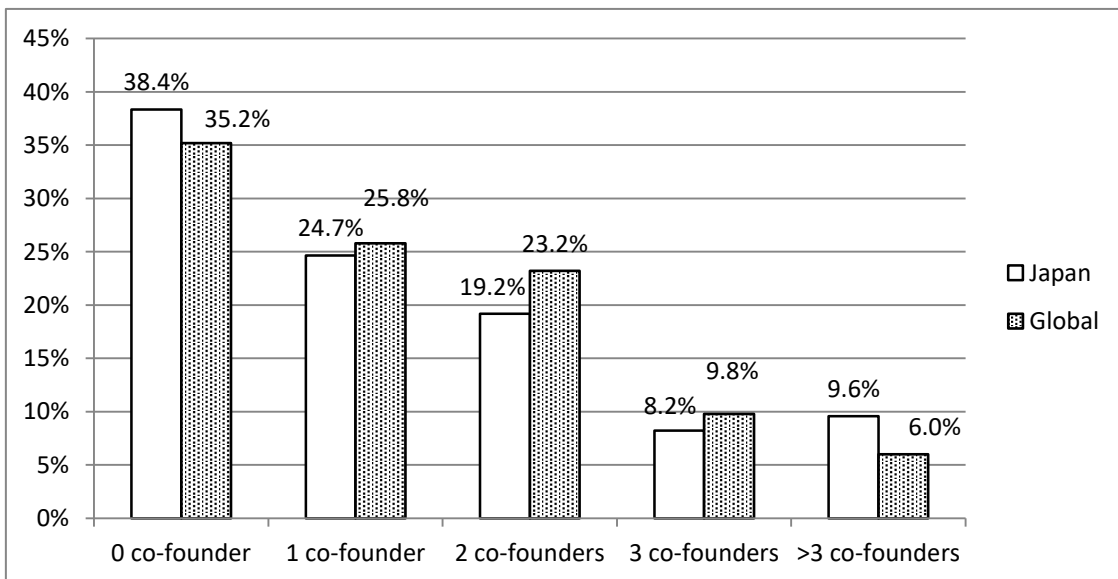


Table 5: Business performance rating scores (Japan)

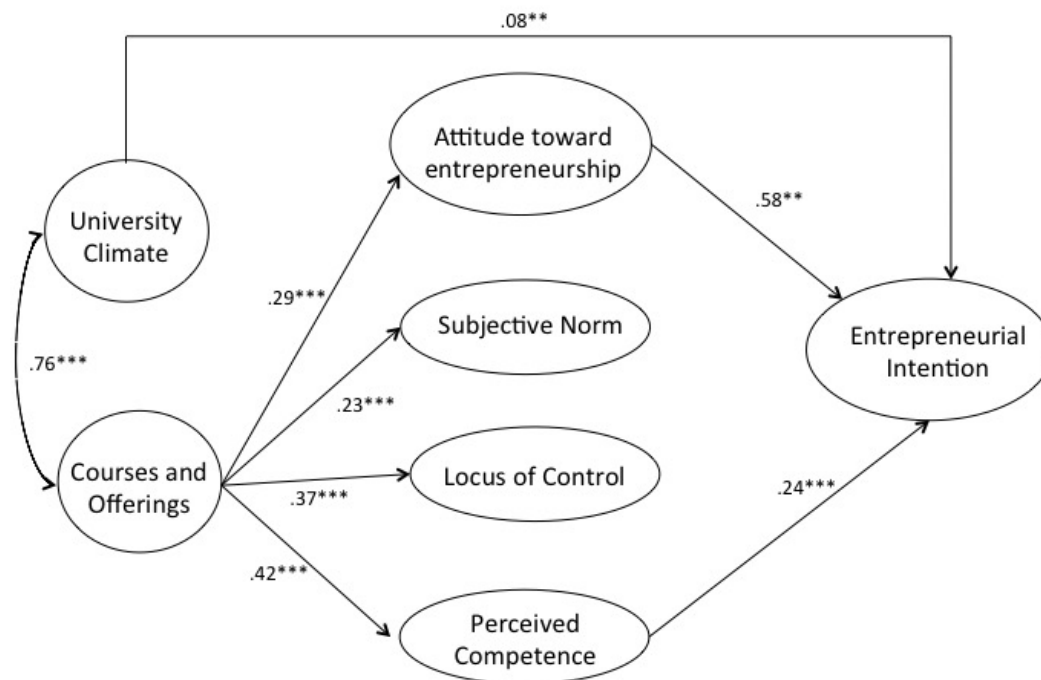
Dimensions	average	standard deviation
Innovation	4.15	1.760
Profit growth	4.07	1.535
Sales growth	4.03	1.527
Market share growth	3.85	1.507
Job creation	3.49	1.871

7 = much better; 1= much worse

7. Analysis of factors that increase entrepreneurial intention

It should be possible to increase entrepreneurial activities by building an understanding of what kind of education and support will be most effective, whether it is entrepreneurship education, or the atmosphere at universities that promote entrepreneurship. The results of this section could helpfully establish future efforts at Japanese universities.

Figure 27: Factors Affecting Entrepreneurial Intention (Japan)



n=3117, * $p < .05$; ** $p < .01$; *** $p < .001$,

$\chi^2(449) = 5144.87$, NFI = .927, RFI = .920, CFI = .933, RMSEA = .058, AIC = 5302.87

Values are standardized coefficients.

This model is based on the theory of planned behavior. The right-hand side of Figure 27 verifies which factors will affect entrepreneurial intention (The included paths, index variables, error variables, and correlations between error variables have been omitted, but they are included in the model.). Each latent variable will be described below.

Entrepreneurial intention is measured on the basis of responses received for six questions intended to gauge the respondent's enthusiasm about starting a company, e.g., whether they are ready to be an entrepreneur; whether they see being an entrepreneur as a vocational goal, how much effort is spent on starting a company, and whether they are seriously considering to start a company at the moment (Linan & Chen 2009).

7.1 Latent variables

University climate and whether or not it encourages the creation of new business ideas and whether it encourages students to engage in entrepreneurial activities have a favorable influence on entrepreneurship (Franke & Lüthje 2004; Geissler 2013).

Courses and Offerings is intended to teach students more about entrepreneurial attitudes, values, and motivation and ways to start their own business. There are five questions on this topic in the survey, including asking respondents if they have had the opportunity to enhance their technical skills, expand their networks, and discover new business opportunities (Souitaris et al. 2007).

Attitude toward entrepreneurship gauges whether the respondent sees more advantages than disadvantages in becoming an entrepreneur and whether they perceive an entrepreneurial career to be attractive. There are five questions on this topic in the survey, e.g., whether or not the respondent has sufficient resources and the opportunity to become an entrepreneur.

Subjective norms is the degree to which family, friends, and fellow students agree with the idea of entrepreneurship (Linan & Chen 2009).

Locus of control refers to respondents' ability to protect their own interests and see their plans to fruition; it is evaluated on the basis of three questions (Levenson 1973).

In addition, there are seven questions on the survey that deal with "perceived competence," inquiring about discovering new business opportunities, managing business innovation, becoming leaders and facilitators, and building networks of experts (Zhao et al. 2005; Weber & Schaper 2004; Forbes 2005; Chen 1998).

The two variables on the left side of Figure 27 represent "the university's climate" and "university's courses and offerings." "The university's climate" has a direct positive correlation with "entrepreneurial intention," with no indirect effects. At the same time, "courses and offerings" influence "entrepreneurial intention" through "attitude toward entrepreneurship" and "percieved competence." Interestingly, although "courses and offerings" are positively correlated with "subjective norms" and "locus of control," they do not equate directly into "willingness to start a business." Surrounded by people who understand entrepreneurship and realizing that one has control over the contributing factors by themselves are insufficient to trigger entrepreneurial intention.

Incidentally, “courses and offerings” has a direct negative correlation with entrepreneurial intention; this may be due to students realizing through their lectures that they have insufficient skill or ability to start a business, thus becoming more cautious about entrepreneurship as a result.

8. Conclusions

This study aimed at understanding the Japanese students’ career choice intention and levels of entrepreneurship compared to international students and evaluating the impact of the university environment and entrepreneurship education on levels of entrepreneurship.

In all, 70% of the Japanese 4,150 respondents were undergraduates majoring in social sciences; less than 1% of respondents aspired to become company founders immediately after completing their graduation, but 11.7% were aspiring to start a business within five years of completing their graduation. At the global level, the percentage for the abovementioned factors were 8.8% and 38.2%, respectively, thereby suggesting that Japan’s percentage were less than half the international average. Japanese enrollment in entrepreneurship education classes at universities was 50.5%, i.e., similar to the rest of the world, but the number of compulsory courses was low. Moreover, 46.8% of those aspiring to start a business within five years of completing their graduation attended some form of elective class on the subject, but those attending a compulsory course comprised 16.2% of the respondents. Contrasting these percentages with the global averages of 45.8% and 44.6%, respectively, we see that increasing the number of compulsory courses may increase the number of people who see entrepreneurship as a career option in Japan.

Through self-assessment of the seven personal skills of management, those who expressed a desire to be entrepreneurs tended to score more highly than those seeking full-time employment.

In addition, 12.8% of the Japanese respondents were nascent entrepreneurs preparing for entrepreneurship, and 1.3% were active entrepreneurs already running their own businesses. However, the nascent entrepreneurs revealed a lack of concrete action, with just 20% indicating that they were actively gathering information on markets and competitors, or talked about products with potential customers; however, less than 10% had drafted a business plan. Advertising/design/marketing is the most common type of business planned by respondents, with about 80% of respondents indicating that they intended to form a founding team rather than work by themselves. Advertising/design/marketing firms are also the most active form of entrepreneurship, with 70% of respondents planning multiple start-ups. Self-fulfillment and solving social problems scored more highly as motivating factors for entrepreneurship than purely economic motives.

A survey of the 275 respondents with at least one parent operating their own business exhibited a correlation between the performance of the parent’s company and the respondent’s willingness to assume it. However, when comparing the likelihood of taking over the business or starting a new business, the desire to inherit the business exceeds the desire for entrepreneurship when businesses perform poorly, indicating a desire to help their parents to

rebuild the business. At medium performance levels, the desire for entrepreneurship takes over, while in truly successful cases, the desire to inherit and the desire to start a new business are equally balanced.

A covariance structure analysis was performed to provide a top-down overview of the factors that affect entrepreneurial intentions. The “university climate” has a positive correlation with the intention to start a business. Additionally, “courses and offerings” influence “entrepreneurial intention” through “attitude toward entrepreneurship” and “percieved competence.” To increase Japanese students’ entrepreneurial intentions in the future, universities can be effective and conducive platforms to initiate strategies to support entrepreneurship, and they should enhance the range of entrepreneurship-related activities. Further research is required to determine the effectiveness of such programs.

References

- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(1), 1-20.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.
- Forbes, D. P. (2005). Are some entrepreneurs more overconfident than others? *Journal of Business Venturing*, 20(5), 623-40.
- Geissler, M., & Zanger, C. (2013). *Entrepreneurial role models and their impact on the entrepreneurial prefounding process*.
- Levenson, H. (1973). Multidimensional locus of control in psychiatric patients. *Journal of Consulting and Clinical Psychology*, 41(3), 397-404.
- Linan, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617.
- Lüthje, C., & Franke, N. (2004). Entrepreneurial intentions of business students: A benchmarking study. *International Journal of Innovation and Technology*, 1(3), 269-288.
- Sieger, P., Fueglistaller, U., & Zellweger, T. (2014) *International Report of the GUESSSS 2013/2014*, University of St. Gallen.
- Sieger, P., Fueglistaller, U., & Zellweger, T. (2016). *Student Entrepreneurship 2016: Insights From 50 Countries. International Report of the GUESSSS Project 2016*, St.Gallen/Bern: KMU-HSG/IMU.
- Souitaris, V., Zerbini, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business venturing*, 22(4), 566-591.
- Weber, P., & Schaper, M. (2004). Understanding the grey entrepreneur. *Journal of Enterprising Culture*, 12(2), 147-165.
- Zhao, H., Seibert, S., & Hills, G. E. (2005). The mediating role of self-efficacy in the

development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265-1272.