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Japanese Country Report of GUESSSS Project 2013/2014



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Student Entrepreneurship Survey Report

— Analysis of GUESSS 2013 Results from Japan —

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Summary

759 universities from 34 countries participated in the GUESSS 2013 survey of student entrepreneurial spirit. The global survey produced a total of 109,026 valid responses. In Japan, 19 universities and graduate schools participated, producing a total of 890 valid responses.

Comparing results from all participating countries with those from Japan, we find that when asked about career preferences immediately after and five years after graduation, a higher proportion of students in Japan hope to be employed (82.3% just after graduation, 62.9% after five years). In the total sample, 30.7% hope to become entrepreneurs after five years; in Japan only 10.4% share this aspiration. Those preparing to launch businesses account for 15.1% of the total sample. In Japan this figure is only 11.2%. In the total sample, 5.5% have already started businesses, in Japan only 1.2%.

Whether the question is intention to start a business, entrepreneurial skills, or activities related to starting a business, Japanese students score lower than their peers from other countries. The only item on which Japanese students score higher is “University climate stimulates ideas for new kinds of business.” Very few, however, have taken one or more courses related to entrepreneurship.

Correlation analysis of factors increasing students entrepreneurial intentions reveals a strong positive correlation between desire to start a new business and “a university environment that promotes entrepreneurship.”

Keywords: University students, entrepreneurial activities, entrepreneurial intentions, international comparisons

1. Introduction

1.1 Background

GUESSS (GLOBAL UNIVERSITY ENTREPRENEURIAL SPIRIT STUDENTS’ SURVEY) is an international research project organized by The Institute for Small Business and Entrepreneurship at the University of St. Gallen in Switzerland. The Center for Family Business provides coordination and administrative support. This global survey of undergraduate and graduate student entrepreneurial intentions and activities. The survey has been conducted six times, every two years since the first

survey in 2003. Japanese universities have participated twice, in 2011 and 2013.

In 2013, thirty-four countries participated in the GUESSS project. The survey gathered 109,026 responses from 759 universities all over the world. For analysis of these total results see Siger et al. (2014), *International Report of the GUESSS 2013/2014*.¹

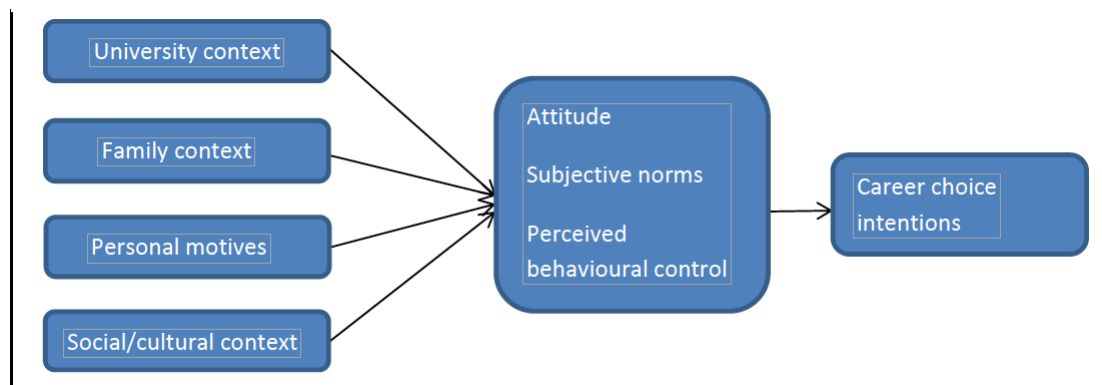
1.2 Research Objective and Framework

The basic objective of this research is to gather data on student career selection and entrepreneurial activities continuously from all around the world, in an effort to provide information of value to universities, students, supporters, and policymakers.

Turning to details, the survey is based on the Theory of Planned Behavior (Ajzen 2002). Its aim is to analyze the impact of factors affecting career choice (especially choice of entrepreneurial activities): university environment and education related to entrepreneurship, personal motives, family situation, and other institutions. The 2013 survey placed special weight on family business background and education in entrepreneurship as factors affecting the choice of an entrepreneurial career.

This framework is illustrated in Figure 1.

Figure 1. GUESSS 2013 Survey Theoretical Framework



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

1.3 Research Method

In each participating country, a lead university is chosen. Other universities are then invited to participate. The same questionnaire is used by all participating universities. The original questionnaire is prepared in English, and the lead university in each country is responsible for its translation into the local language. Questions specific to each country may be added as needed.

¹Downloadable from the GUESSS website (<http://guesssurvey.org>).

The questionnaire is stored on the Web, and each participating university sends emails to its students containing the URL for it along with an invitation to participate in the survey. In Japan, the survey was conducted from October 2013 to January 2014. While the participating universities sent email messages to all of their students, many students now ignore email, preferring to use LINE, Twitter, or other social networking systems instead. For this reason, there were very few responses to the emails. To address this situation, cooperating university instructors and professors distributed fliers or distributed the questionnaire directly to students in their classes. Where possible, smart phones were used to collect answers during classes.

As a result, 890 responses were collected. Table 1 breaks down the responses by the universities at which they were collected. Special thanks is owed to everyone who cooperated with this survey.

Table 1. Responses by University

University	N	%	University	N	%
Hosei University	247	27.8	Kyushu University	9	1.0
Senshu University	129	14.5	Musashino University	12	1.3
Aichi Gakuin University	25	2.8	Osaka City University Graduate School	10	1.1
Chuo University	4	0.4	Osaka City University	22	2.5
Hitotsubashi University	23	2.6	Osaka University	111	12.5
J. F. Oberlin University	89	10.0	Ryukoku University	86	9.7
Keiai University	4	0.4	Takachiho University	26	2.9
Keio University	7	0.8	University of Tokyo	11	1.2
Kobe University	3	0.3	Tohoku University	54	6.1
Kyoto Women's University	18	2.0	Total	890	100.0

2. GUESSS 2013 Comparison of Global Results and Results from Japan

2.1 Data Gathered

Table 2 breaks down GUESSS 2013 global responses by country. Because the office in charge of coordination is located at a Swiss university, the number of European countries participating is high. In Asia, only Japan, Singapore, and Malaysia participated.

The number of requests to students to complete the questionnaire was 1,959,229. The response rate was 5.5%.

Table 2. GUESSS 2013 Responses by Country

		Responses	%	Cumulative %
Country	SUI Switzerland	7419	6.8	6.8
	LIE Lichtenstein	203	.2	7.0
	GER Germany	10570	9.7	16.7
	AUT Austria	4220	3.9	20.6
	FRA France	332	.3	20.9
	BEL Belgium	402	.4	21.2
	FIN Finland	704	.6	21.9
	HUN Hungary	8844	8.1	30.0
	AUS Australia	495	.5	30.4
	SIN Singapore	6471	5.9	36.4
	MEX Mexico	637	.6	37.0
	EST Estonia	1391	1.3	38.2
	LUX Luxembourg	153	.1	38.4
	GRE Greece	435	.4	38.8
	POR Portugal	213	.2	39.0
	NED Holland	9907	9.1	48.1
	ENG England	654	.6	48.7
	ROM Romania	277	.3	48.9
	RUS Russia	4578	4.2	53.1
	NGR Nigeria	7	.0	53.1
	JPN Japan	890	.8	53.9
	ARG Argentina	190	.2	54.1

BRA	Brazil	12561	11.5	65.6
CAN	Canada	509	.5	66.1
COL	Columbia	801	.7	66.8
DEN	Denmark	1027	.9	67.8
ISR	Israel	1086	1.0	68.8
ITA	Italy	7765	7.1	75.9
POL	Poland	11860	10.9	86.8
SCO	Scotland	280	.3	87.0
SLO	Slovenia	903	.8	87.9
ESP	Spain	10545	9.7	97.5
MYS	Malaysia	2452	2.2	99.8
USA	America	245	.2	100.0
Total		109026	100.0	

2.2 Respondents' Attributes

The average age of students in the global sample was 23.1, slightly higher than the average in Japan, 21.1. In the global sample, 58.4% of the respondents are women, 41.6% are men. In Japan, however, only 39.7% are women; 60.3% are men.

2.3 Student Status at University

As in the global sample, the proportion of undergraduates is high in Japan (Figure 2).

Figure 2. Respondent Status

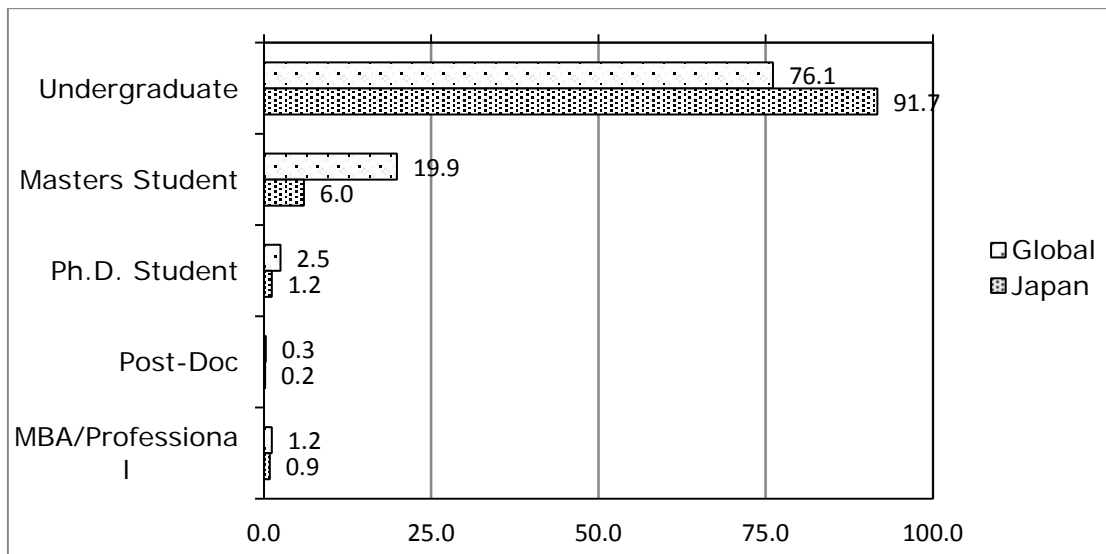


Table 3 shows the breakdown by major. Since in Japan, questionnaires were distributed by management, business, and economics faculty, the percentage of students majoring in business or management is exceptionally high compared to the global sample.

Table 3. Respondents' Majors

Major	Global		Japan	
	N	%	N	%
Business/management	24386	22.4	515	58.2
Law	3955	3.6	20	2.3
Economics	9363	8.6	80	9.0
Other social science (including education)	8789	8.1	46	5.2
Engineering, architecture	16489	15.1	65	7.3
Mathematics, natural science	5352	4.9	16	1.8
IT	6116	5.6	69	7.8
Medical and health sciences	8043	7.4	11	1.2
Agriculture, forestry, nutrition science	2181	2.0	2	0.2
Language, literature (including psychology, philosophy, religion)	5507	5.1	48	5.4
Art, science of art	1729	1.6	3	0.3
Other	17019	15.6	10	1.1
Total	108929	100.0	885	100.0

In order to facilitate analysis of effect of major on entrepreneurial activities and career choice, the study fields from Table 3 were grouped into three main categories: “Business, economic, and law” (BECL),² “Natural sciences and medicine” (NSM),³ and “Social sciences” (SSC).⁴ BECL includes “Business / Management,” “Economics,” and “Law”; NSM includes “Engineering and architecture,” “Mathematics and natural sciences,” “Information science / IT,” “Agricultural science, forestry, and nutrition science,” and “Medicine and health sciences;” and SSC comprises “Linguistics and cultural studies (including psychology, philosophy, religion).” “Other”, includes art and

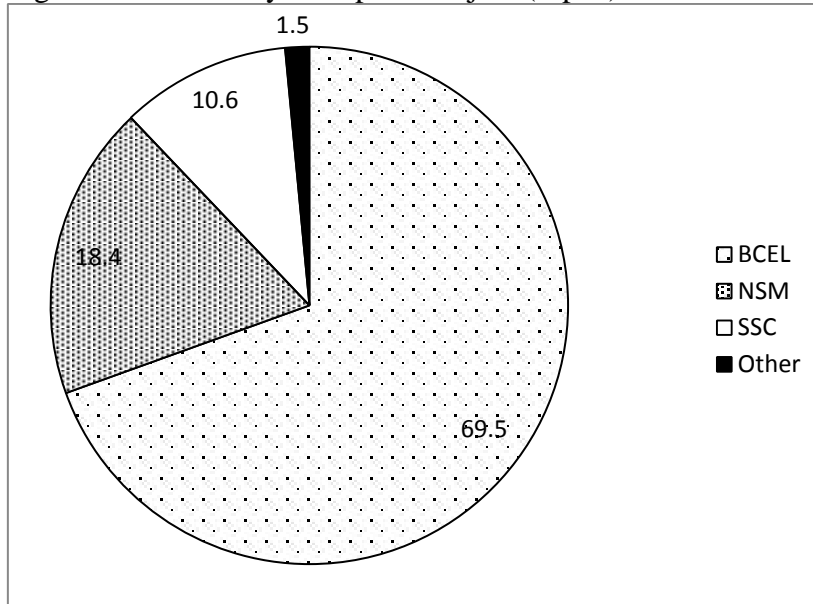
² BECL includes management/business, economics and law.

³ NSM includes engineering and architecture, mathematics and natural science, IT, medicine and health sciences, agricultural science, forestry and nutrition science.

⁴ SSC includes other social sciences, linguistics, and cultural studies.

science of art as well as other fields.⁵

Figure 4. Students by Groups of Majors (Japan)



2.4 Career Choice Intentions

Students were asked about career preferences for just after graduation and five years later. In the global sample, 17.0% prefer small companies, 20.7% prefer medium-size companies, and 22.0% prefer large companies just after graduation. The percentages wishing to work for companies five years later, however, decline. The percentage hoping to found and run their own companies five years later rises to 30.7%. In Japan, the majority hope to work for companies just after graduation; nearly forty percent (39.9%) hope to work for large companies. Only 1.5% hope to found and run their own companies just after graduation. For five years later, this figure rises to only 10.4% (Table 4).

Table 4. Hopes for Just after graduation and Five Years Later (%)

	Global		Japan	
	Just after	After 5 years	Just after	After 5 years
An employee in a small firm (1-49 employees)	17.0	3.9	6.1	3.8
An employee in a medium-size firm (50-249 employees)	20.7	7.9	24.8	13.6

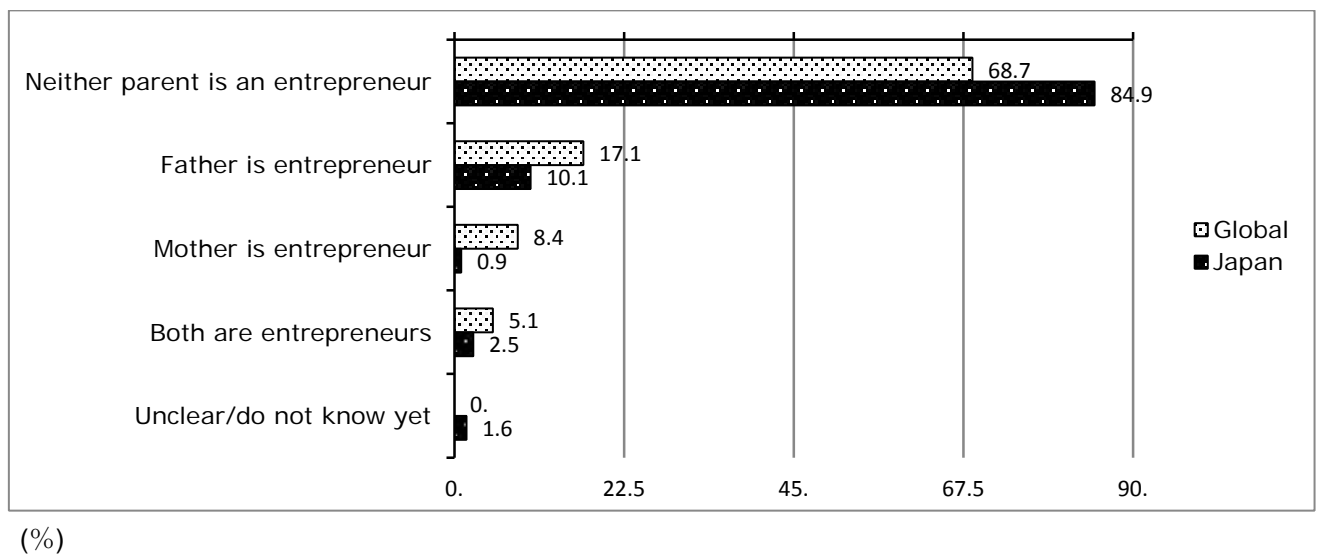
⁵ Other includes Other plus art and science of art.

An employee in a large firm (250 or more employees)	22.0	19.0	39.9	33.4
An employee in a nonprofit organization	3.2	2.9	1.6	2.1
An employee in academia (academic career path)	6.4	6.8	3.0	3.6
An employee in public service	10.2	10.2	6.9	6.4
A founder (entrepreneur) working in my own firm	6.6	30.7	1.5	10.4
A successor in my parents'/family's firm	1.3	2.0	0.6	2.1
A successor in a firm not currently controlled by my family	0.4	2.3	0.1	0.4
Other/do not know yet	12.1	14.5	15.6	24.0

When asked about founding a company, 15.1% of the global sample say that they would like to found a company or work for themselves. In Japan, this figure falls dramatically to 11.2%. When asked if they have already founded a company or gone into business for themselves, 5.5% of the global sample say yes. In Japan those who say yes are only 1.2%.

The GUESSS surveys also attempt to determine if family is a factor affecting students' entrepreneurial intentions or entrepreneurial activities. Figure 4 shows the proportion of Students with family members (father, mother, both) who have gone into business for themselves. In Japan the percentage is low.

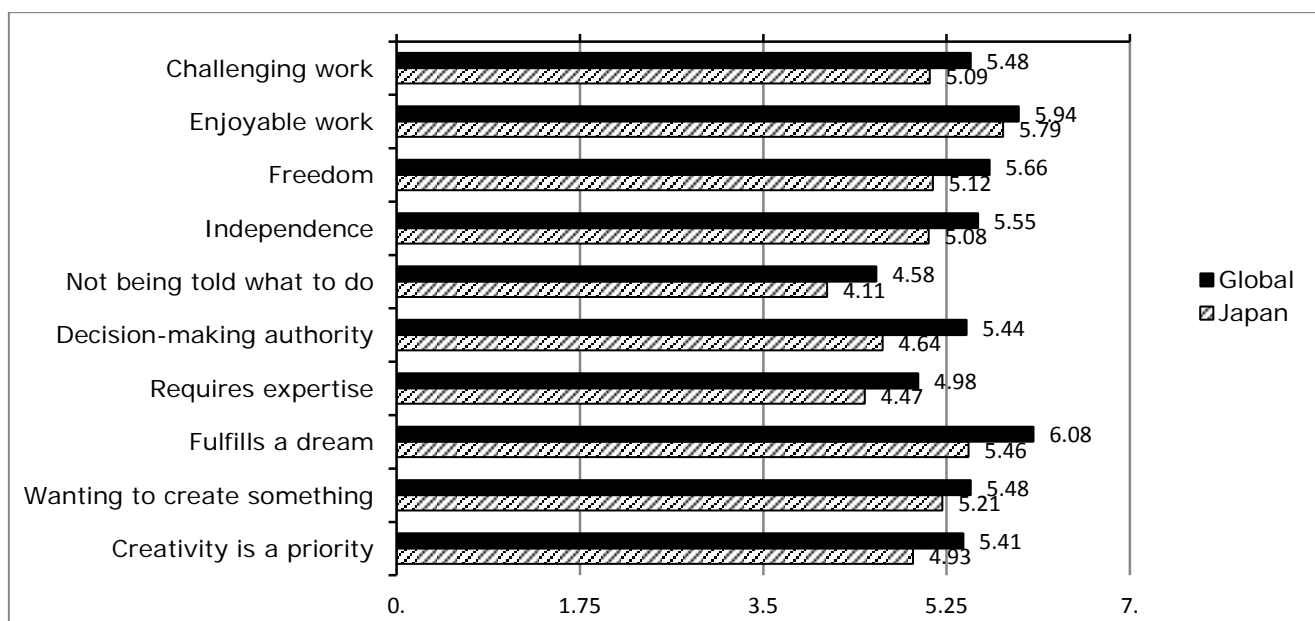
Figure 4. With Parents in Business for Themselves



To clarify which types of jobs students prefer, they were asked to rank the items listed in Figure 5 on a scale from 1=not important at all to 7=extremely important.

The goal was to see if items related to independence and creativity are associated with entrepreneurial activities. For all items, the average score is lower in Japan than in the global sample.

Figure 5. Items Weighted Heavily in Choosing Jobs



Note: The figures reported here are the averages of all responses on a scale from 1=not important at all to 7=very important.

2.5 The University Context

The literature suggests that the university context, its provision and engagement in entrepreneurial education, course offerings and climate, can affect students' entrepreneurial intentions.

First, we examined whether the university context provides support for students' entrepreneurial activities. When asked whether campus atmosphere promotes the creation of ideas for new businesses, more Japanese than global students agree with this evaluation. When asked, however, if the atmosphere at their universities encourages students to become entrepreneurs or whether their universities provide backing for entrepreneurial activities, scores for Japan are lower than those for the global sample as a whole (Figure 6).

When asked if university lectures or courses improve their personal ability to engage in business or entrepreneurial activities, Japanese students are slightly more likely to agree that their classes deepen their understanding of the activities required to start a business (Global, 3.76; Japan, 3.79) but score lower on other items (Figure 7).

When asked about courses related to entrepreneurship, a higher proportion of Japanese students are more likely to have taken one or more courses (Global, 19.4%; Japan, 35.3%), but fewer will have taken required or specialized courses (Figure 8).

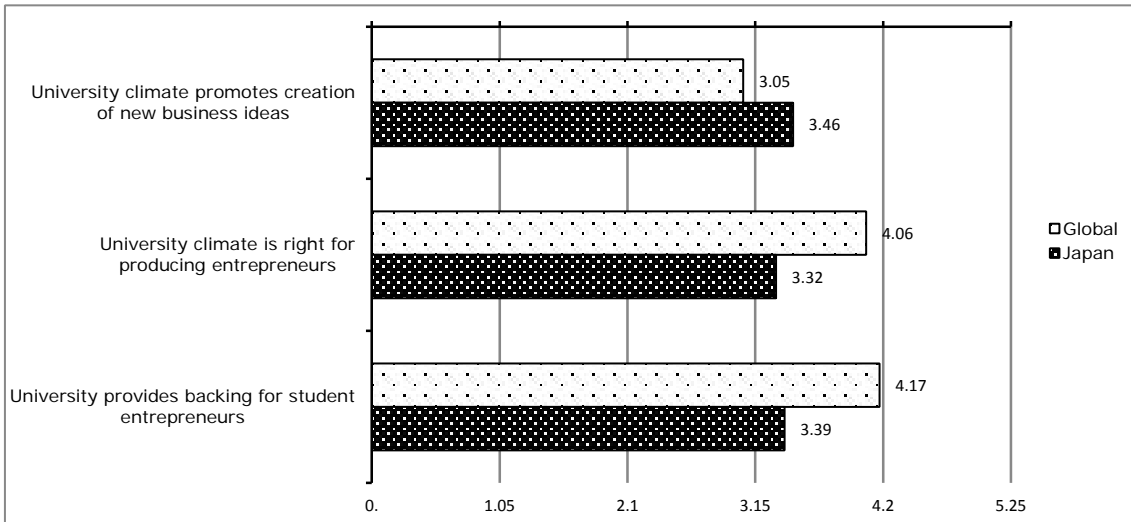
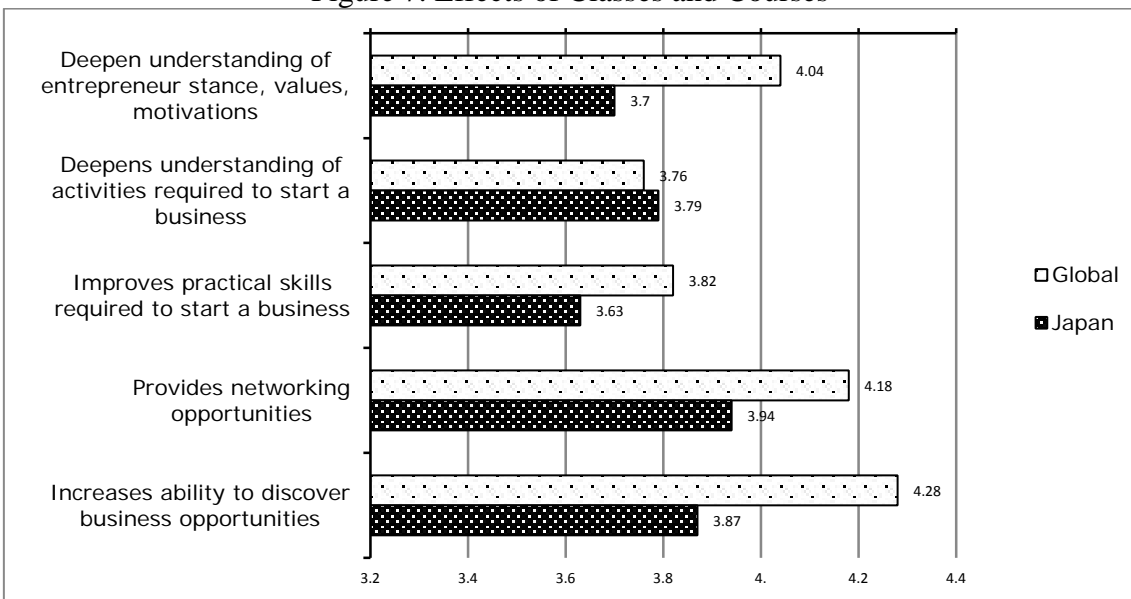


Figure 6. University Support and Climate for Student Entrepreneurial Activities

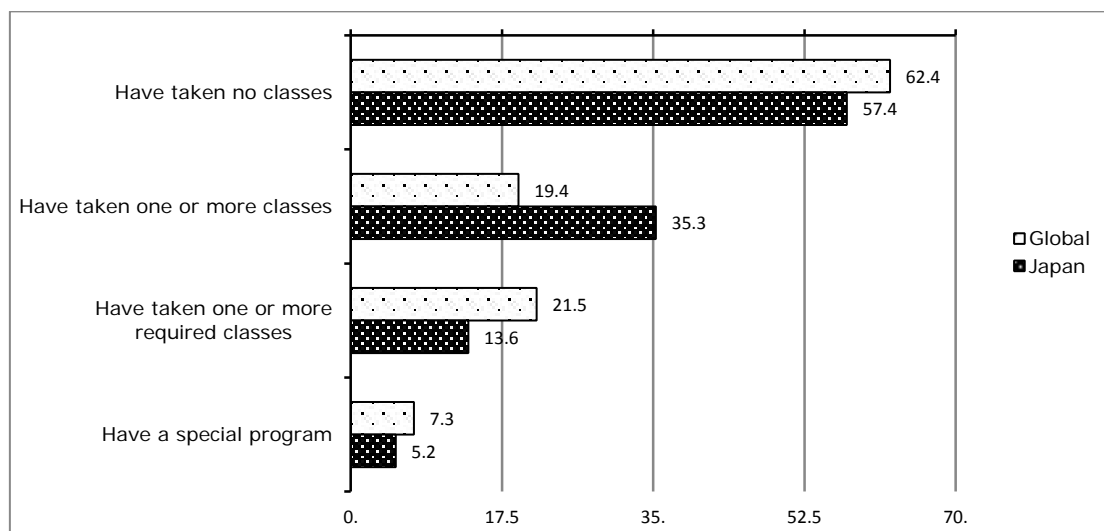
Note: Figures are averages of all answers 1-7.

Figure 7. Effects of Classes and Courses



Note: Figures are averages of all answers 1-7.

Figure 8. Classes Related to Entrepreneurial Activities



Note: Figures are the proportion of “Agree” answers. Multiple answers permitted.

Few universities in Japan offer special programs or required courses designed to foster entrepreneurs. It is difficult to imagine that one or two courses are sufficient to develop an entrepreneurial stance and motivation and provide the practical skills required to start a business.

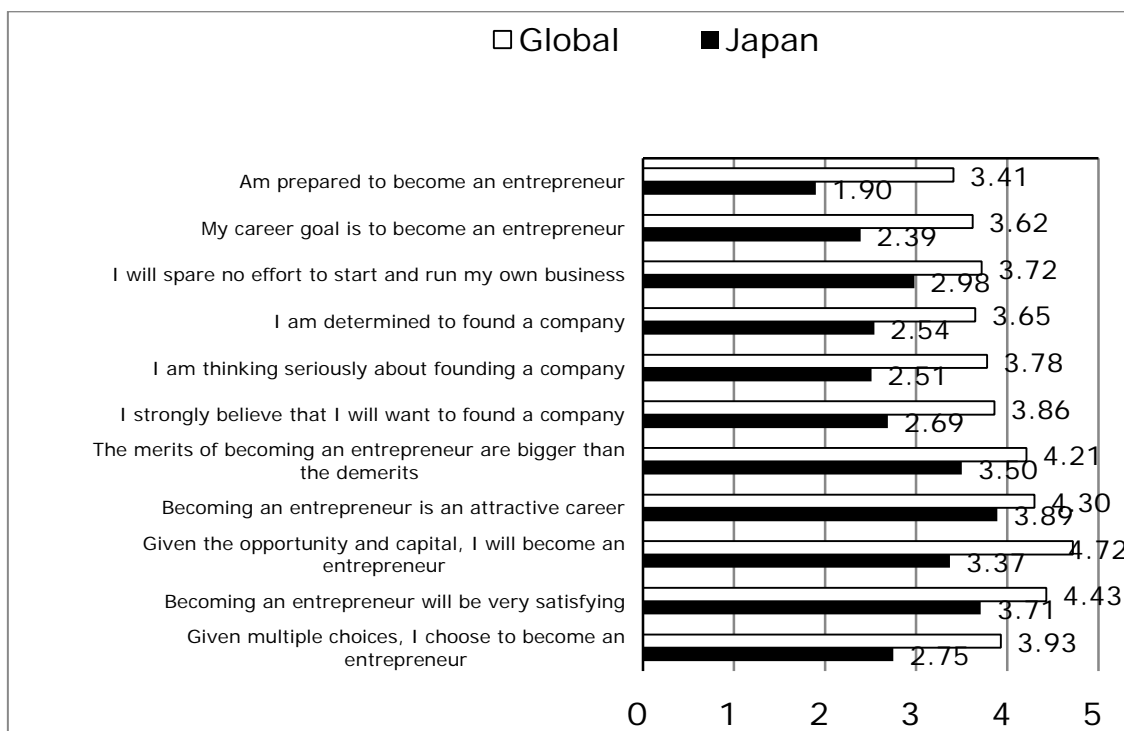
2.6 Choosing to Become an Entrepreneur

We explored student thinking about entrepreneurial activities and especially whether they had a positive attitude or a strong intention to become entrepreneurs (Figure 9). In this section of the questionnaire they were asked to express their agreement or disagreement on a seven-point scale from 1=Not at all to 7=Very much. Thus, the larger the figures reported the stronger their positive attitude or strong intention to become entrepreneurs.

Japanese students score lower than their global counterparts on all items. In both entrepreneurial intention and entrepreneurial activities, they seem weak compared to the global sample.

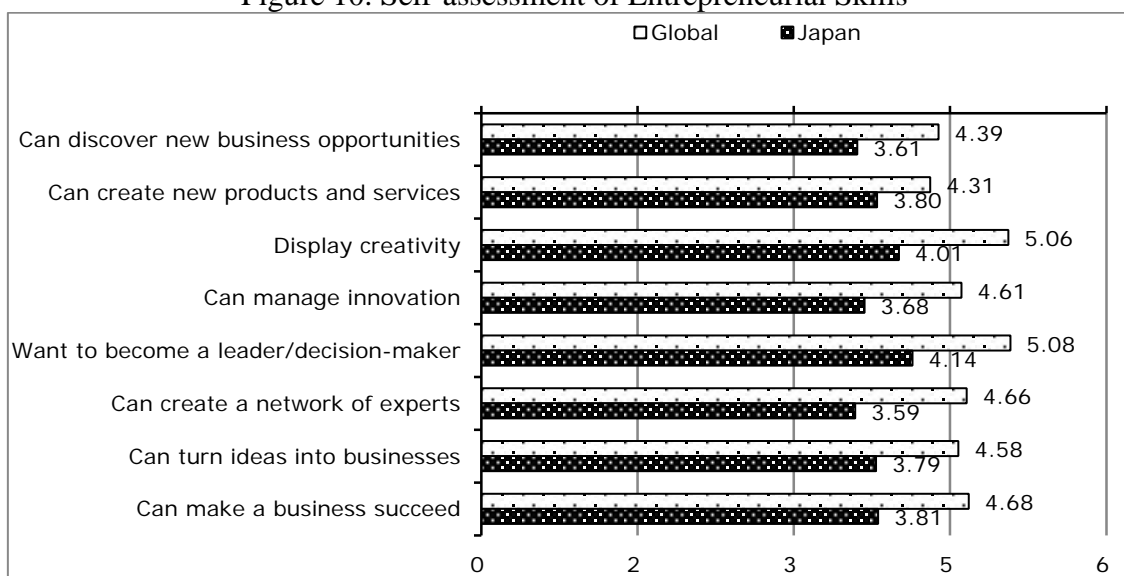
Turning then to self-evaluation of skills required to become an entrepreneur, here, too, Japanese students score lower than their global counterparts on all items, and the gaps are substantial (Figure 10). In part this may be due to their characteristically Japanese reluctance to give themselves high scores. But lack of availability of courses related to entrepreneurship and low interest in becoming entrepreneurs may also help to explain their lack of progress in acquiring relevant skills.

Figure 9. Entrepreneurial Intentions and Entrepreneurial Activities



Note: Figures reported here are averages of answers from 1=Disagree to 7 Strongly agree

Figure 10. Self-assessment of Entrepreneurial Skills



Note: Figures reported here are averages of answers from 1=No ability to 7 = Extremely able

2.7 Concerning Type of Business to Start

11.2% of Japanese students intend to start businesses, compared to 15.2% in the global sample. We turn now to the types of businesses they are planning. Examining innovation in the products and services they are planning to offer, we find that relatively few Japanese students are considering something new for all customers. More are limiting their target and considering offerings that will appeal to a majority or a small number of customers. While 24.3% of the global sample choose produces or services that are not new at all, only 12.4% of Japanese students plan this type of business. Instead, Japanese students prefer to develop innovative products or services for niche markets (Figure 11).

Figure 11. Degree of Newness in Planned Firm's Offerings

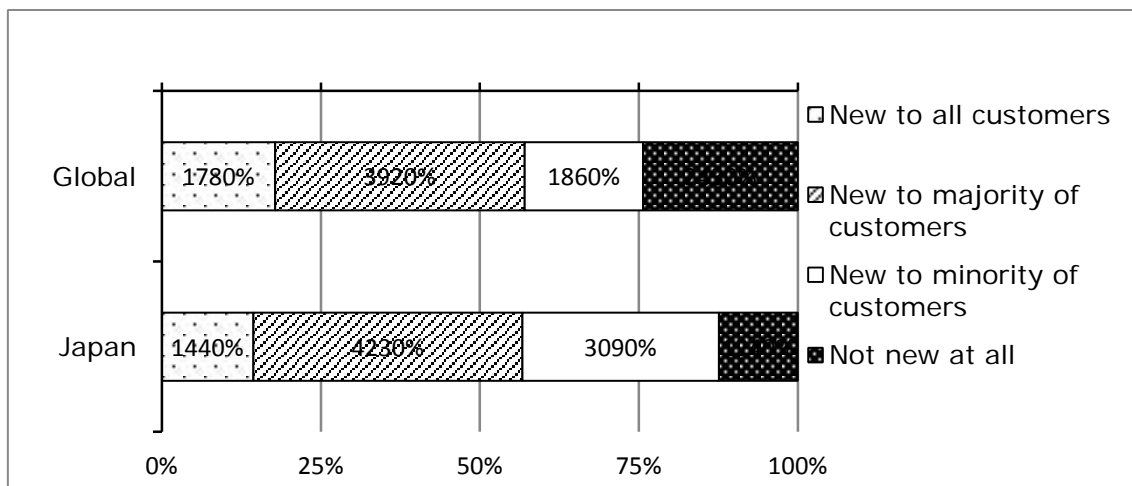
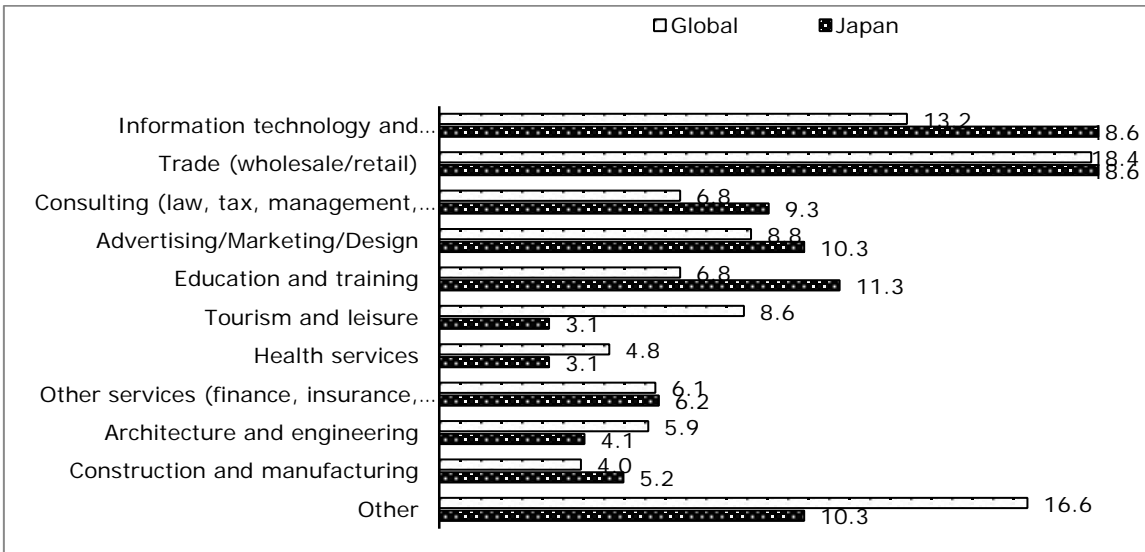


Figure 12. Industry Sectors of Planned Firms



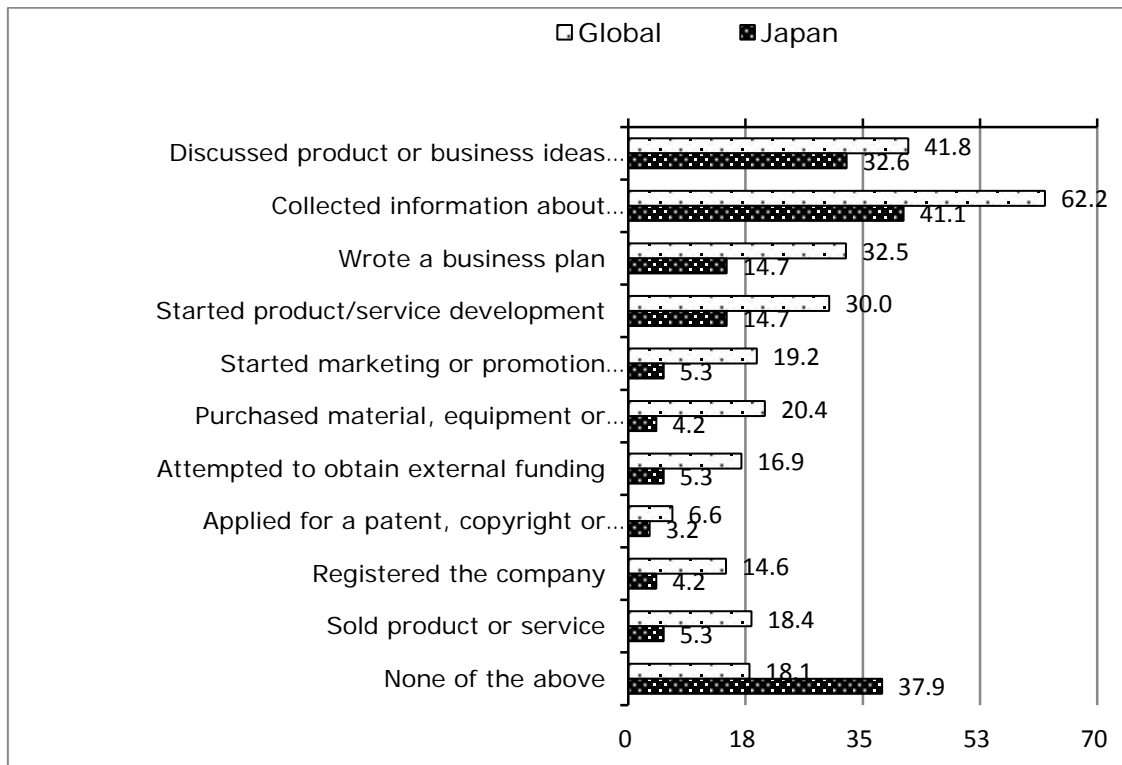
(%)

The percentage of students planning to provide start-up capital themselves is 56.5% in the global sample, 55.7% in Japan.

The breakdown by industry type is shown in Figure 12. In the global sample, trade, information technology and communication, and tourism and leisure are the most popular industries. Information technology and tourism and leisure are also popular in Japan. Japan stands out for the relative popularity of the education and training industry.

As shown in Figure 13, in Japan, few students intending to become entrepreneurs have made concrete preparations for starting a business. The proportion who have engaged in marketing or raising capital for their new businesses is extremely small. In contrast, in the global sample, around 20% have begun developing products or services, marketing their ideas, and procuring capital.

Figure 13. Preparations for Starting Business (Multiple Answers)

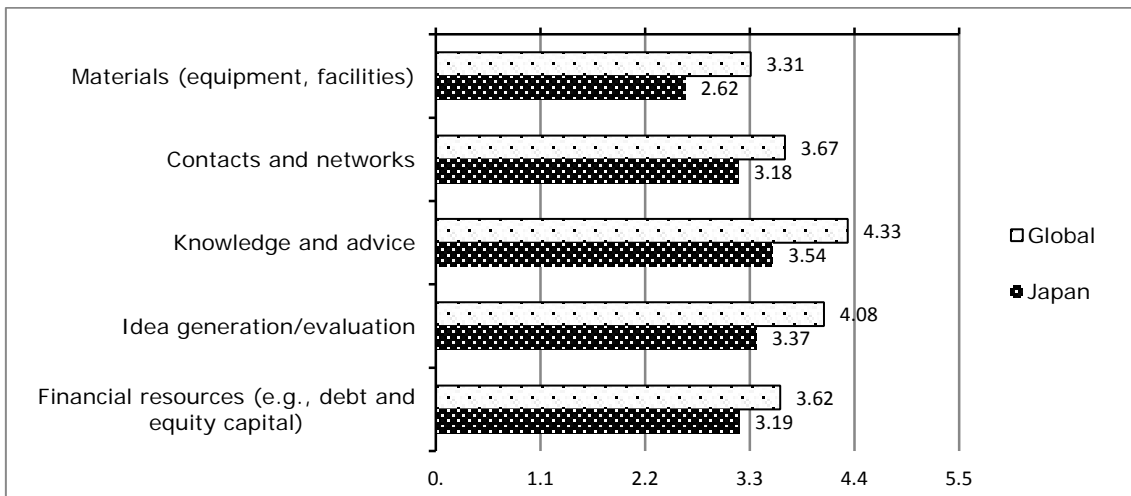


(%)

When students start businesses, they may be able to receive support from relatives. This may be particularly true when parents are self-employed. In both the global sample and Japan, the most common forms of support are “Knowledge and advice” and “Idea generation/evaluation” (Figure 14). That said, Japanese students score lower than their global counterparts on all these items. Relatively few Japanese students expect to receive support from their parents.

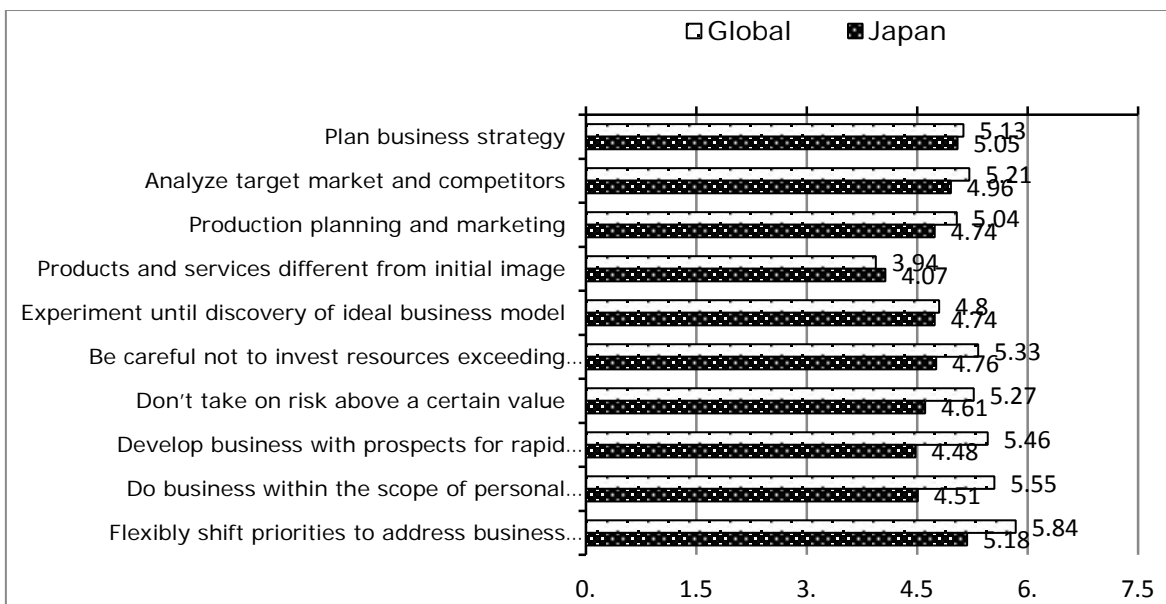
When we come to the section of the questionnaire that addresses process and directions for starting a company (Figure 15), there is no significant difference between Japanese students and the global sample for such items as planning a business strategy, analyzing the target market, or analyzing the competition. Differences do emerge, however, when the topic is risk associated with failure. There is virtually no difference when the item is “Be careful not to invest resources exceeding acceptable loss.” Japanese students score much lower, however, on “Don’t take monetary risk above a certain level” and “Do business within the scope of personal resources.” The fact that scores in Japan are lower overall suggests that Japanese students have trouble distinguishing between degrees of risk. That Japanese students’ scores related to business opportunities are also lower suggests a lack of ability to respond quickly to rapidly changing business environments.

Figure 14. Anticipated Parental Support in Founding Process



Note: These figures are averages of responses from 1=no support to 7=substantial support

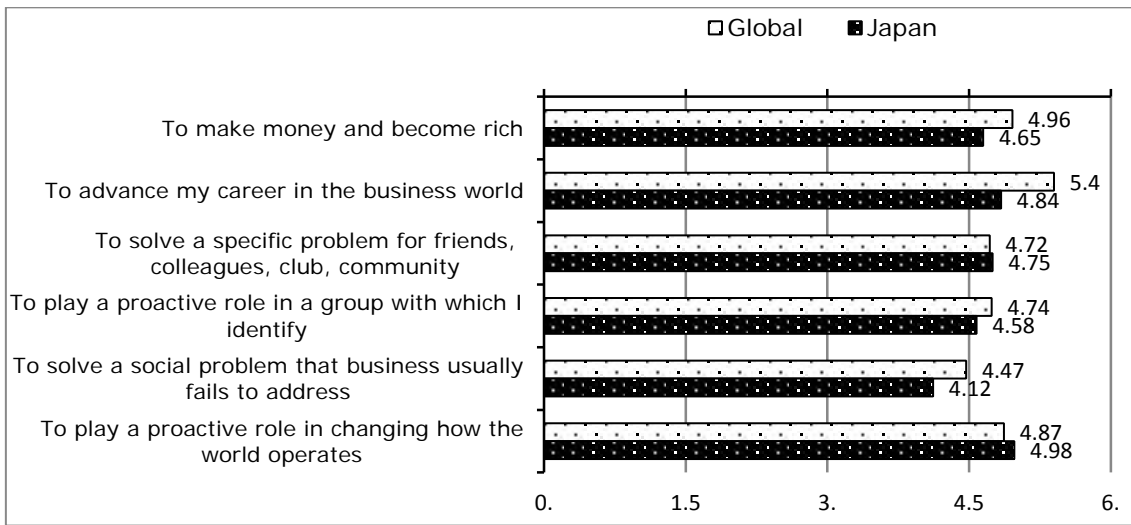
Figure 15. Start-up Process and Directions



Note: These figures are averages of numbers ranging from 1=Not at all to 7=Absolutely.

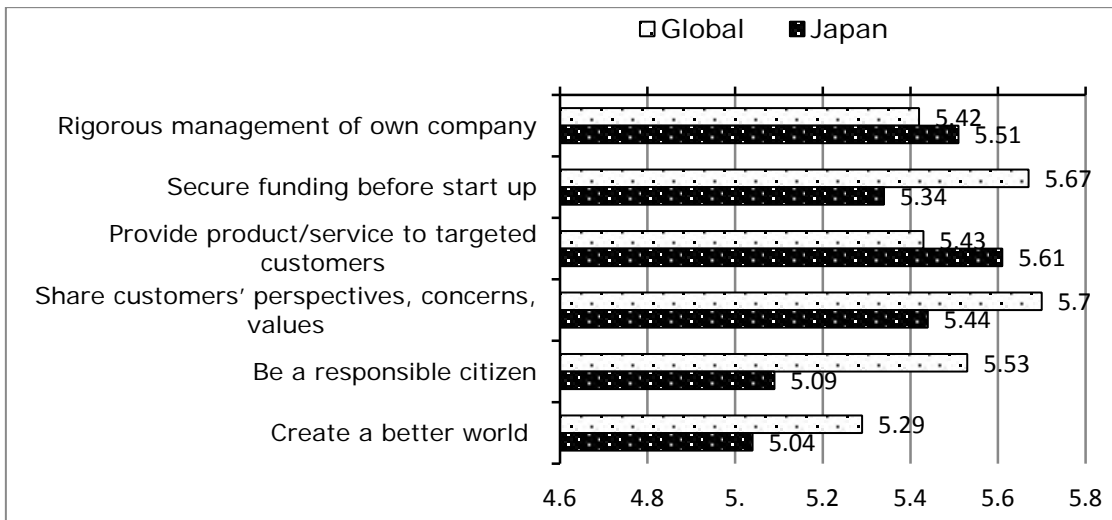
Three sets of questions examine motivations and goals when starting companies. The first concerns motivations for starting a company, with students asked to express agreement or disagreement on a seven-point scale (1=disagree completely, 7=strongly agree). For “To solve a specific problem for friends, colleagues, club, community” and “To play a proactive role in changing how the world operates,” there is no significant difference between Japanese students and their global counterparts. Japanese students’ scores are lower for “To advance my career in the business world”(Global=5.40, Japan=4.84) and “To make money and become rich” (Global=4.96, Japan4.65) (Figure 16).

Figure 16. Motivations for Founding a Company



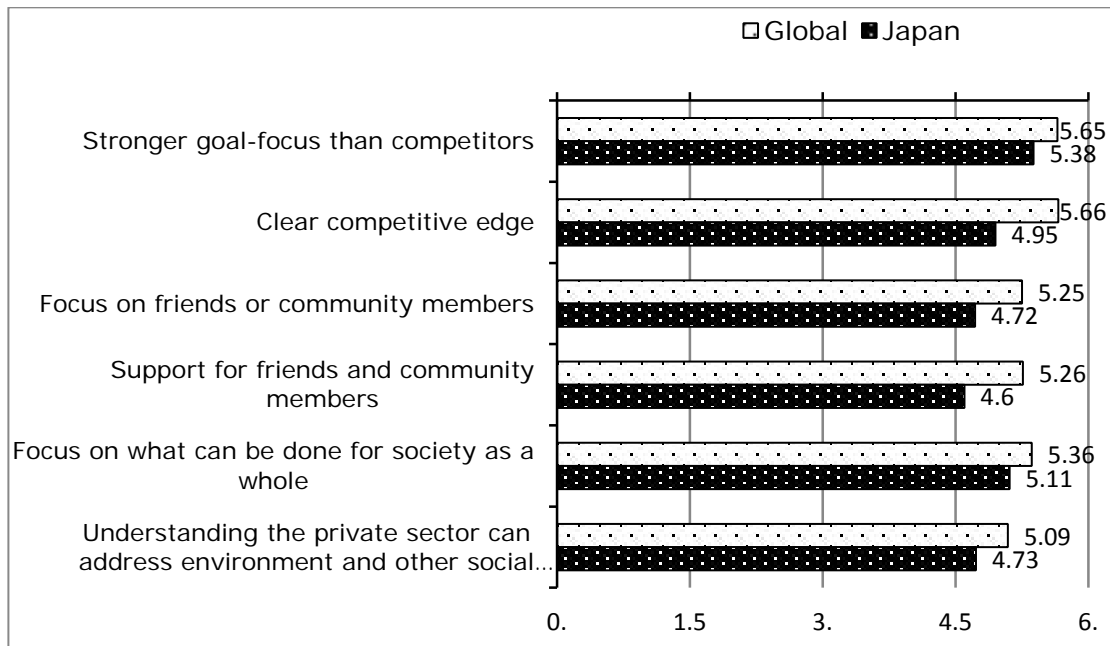
Note: These figures are averages of scores from 1=totally disagree to 7=strongly agree.

Figure 17. Essential Requirements for Company Founder



Note: These figures are averages of scores from 1=totally disagree to 7=agree completely.

Figure 18. Management Perspectives



Note: These figures are averages of scores from 1=totally disagree to 7=agree completely.

When we turn to essential requirements for the founder of a company, we find Japanese students giving more weight to “Provide a useful product/service to customers” (Global=5.43, Japan=5.61) and rigorous management (Global=5.42, Japan=5.61), but less weight to “Secure funding before startup” (Global=5.67, Japan=5.34) and “Be a responsible citizen” (Global=5.53, Japan=5.09) (Table 17).

On items concerning which management perspectives are important, Japanese students score lower than the global sample average on all items (Figure 18). Their scores for “Stronger goal-consciousness than competitors” and “Focus on what can be done for society as a whole” are close to their global counterparts. Here we see a tendency for Japanese students to give higher priority to social contribution than competitive success.

2.8 Active Founders

Next we turn to students who are already running their own businesses. In Japan, however, there are only 11 of them, accounting for just 1.2% of responses. This sample is too small for statistical analysis to be significant.

In the global sample, the average time since the business was founded is 59.3 months (4 years and 11.3 months). In Japan the average is 73.7 months (6 years and 1.7 months). While the number of active founders is small, this comparatively long period may be due to the inclusion of previously employed university students and graduate students in our sample.

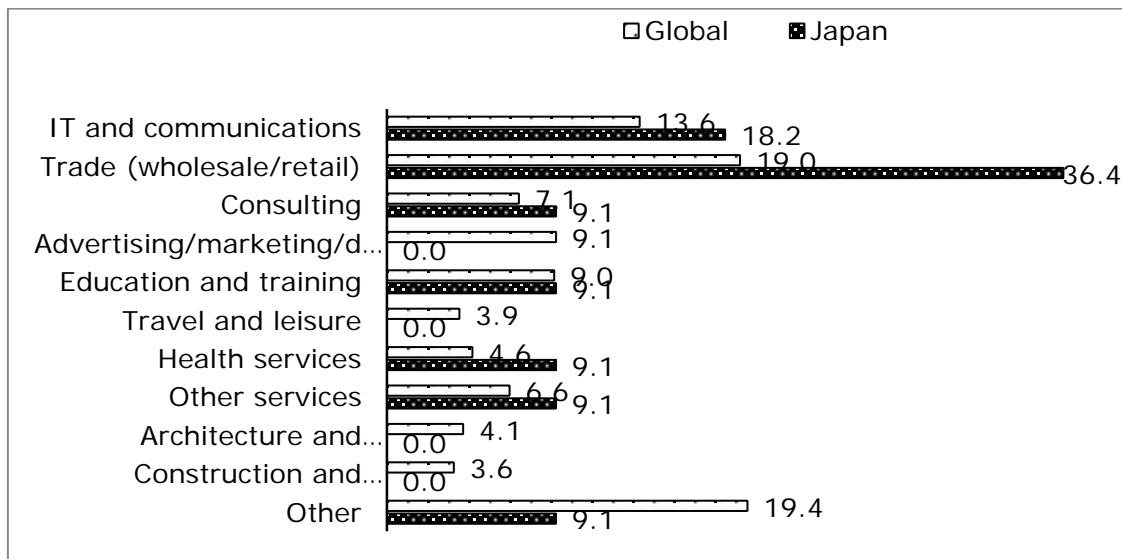
There is no significant difference between average number of full time entrepreneurs in the global sample (3.37) and in Japan (3.22). There is, however, a wide gap between in the numbers of those who expect to be full time entrepreneurs five years

after graduation: 56.16 in the global sample versus only 15.33 in Japan.

When active founders are asked how many hours a week that they do work for their companies, the average in the global sample is 30.5 hours. In Japan the average is 48.8 hours, with both undergraduate and graduate students working more than forty hours a week while continuing to pursue their studies.

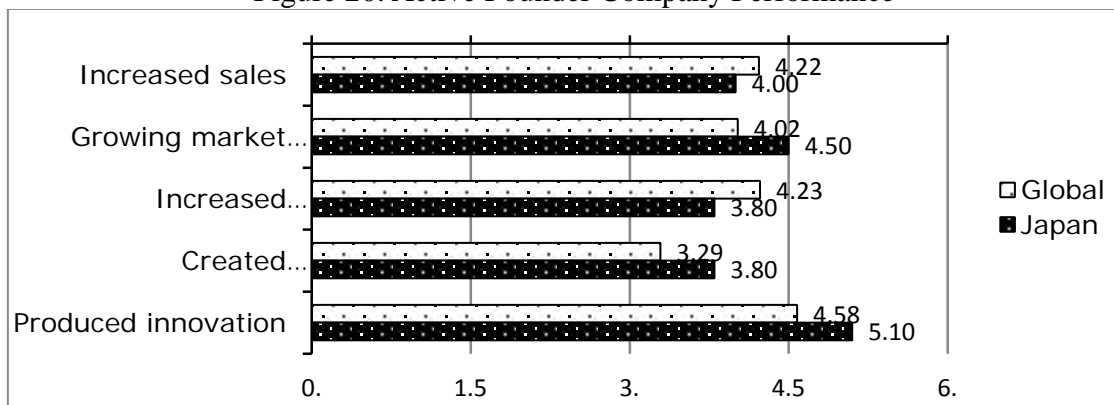
Figure 19 shows the industry sectors in which active founders' companies are located. In Japan the high proportion in trade (wholesale/retail) is striking.

Figure 19. Active Founder Companies by Industry Sector (%)



(%)

Figure 20. Active Founder Company Performance



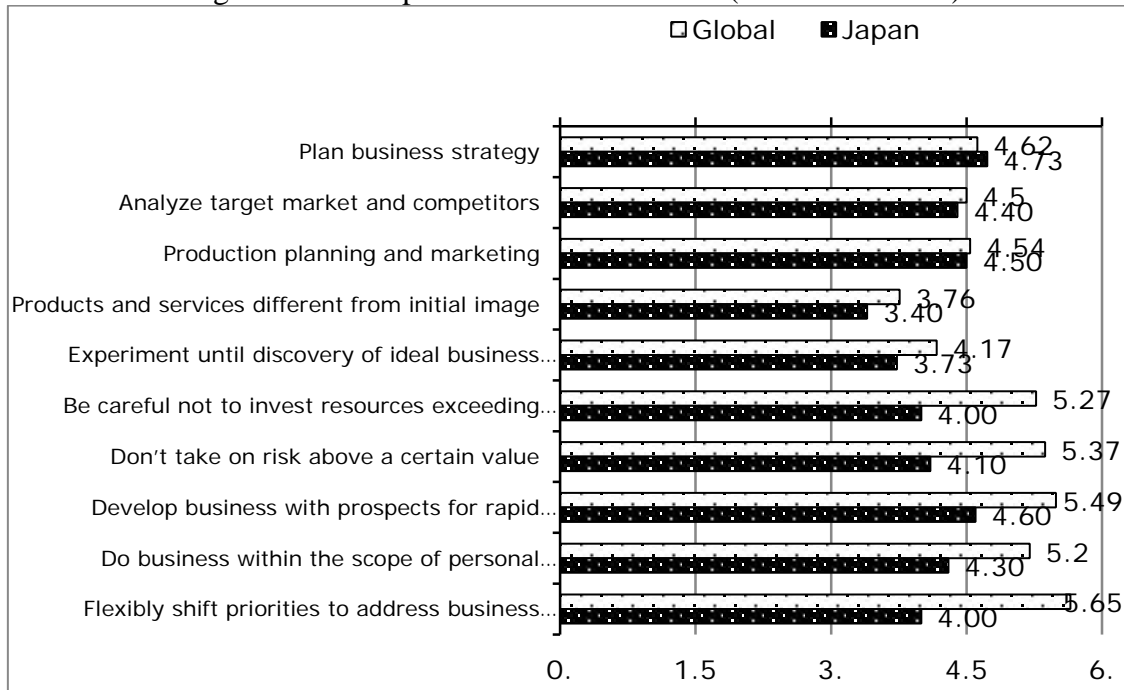
Note: Seven point scale from 1=Poor to 7= Excellent

The average proportion of shares held by founders in their companies is 68.7% in the global sample, 76.9% in Japan, where the share of capital procured from sources other than the founder is small. The average number of active founders who co-founded their companies with partners is 1.91 in the global sample, a slightly higher 2.10 in Japan.

Success in growing sales and increasing profitability are as shown in Figure 20. Japan's active founders score lower on these measures than their global counterparts, but score higher on increased market share, creating employment and producing innovation.

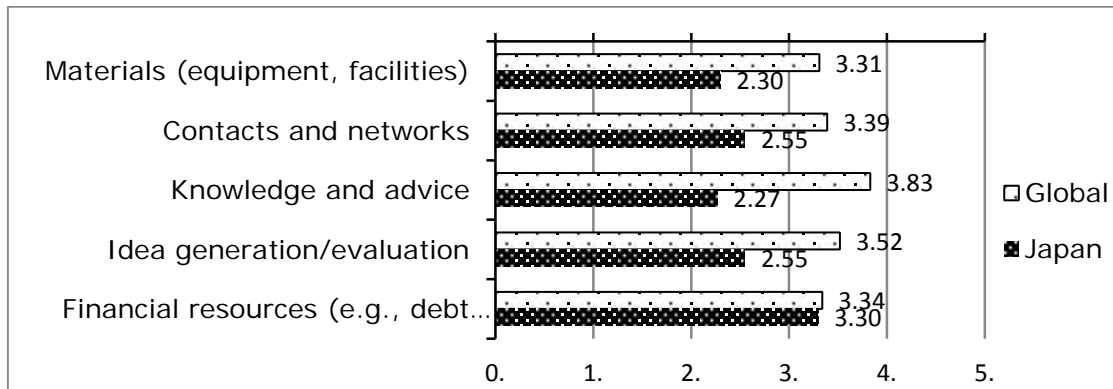
As shown in Figure 21, we see differences between the global sample and Japan in items related to risk taking and taking advantage of business opportunities when active founders are asked about activities and management directions when their companies were founded.

Figure 21. Startup Process and Directions (Active Founders)



Note: Average of answers on scale from 1=Doesn't apply to 7=Applies very well.

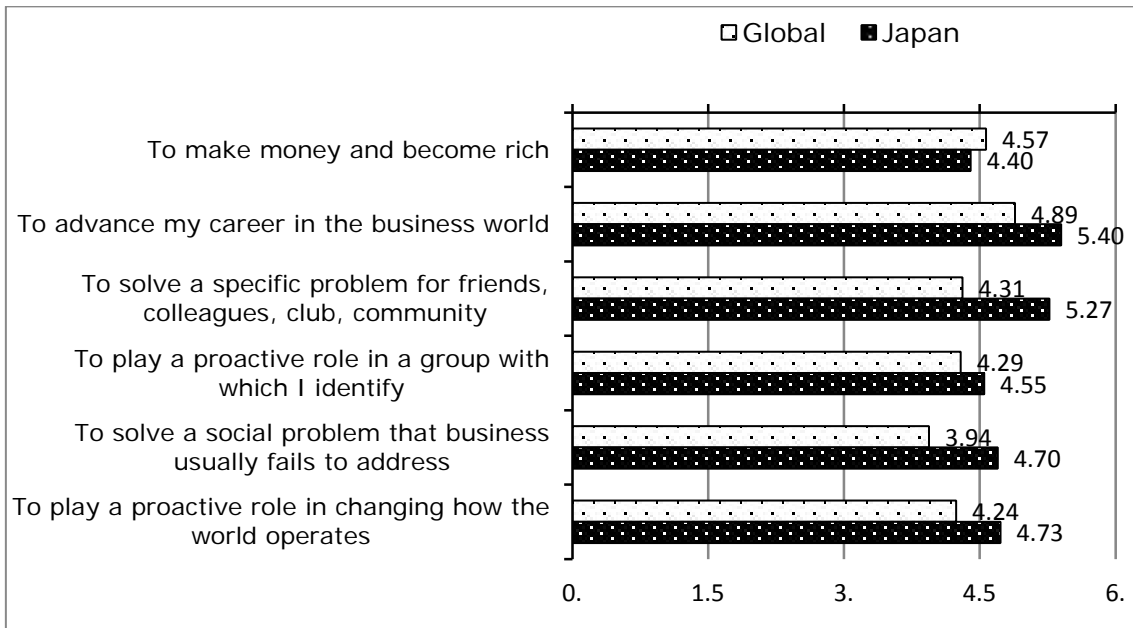
Figure 22. Parental Support in Founding Process



Note: Averages of scores from 1=No support to 7=Substantial support

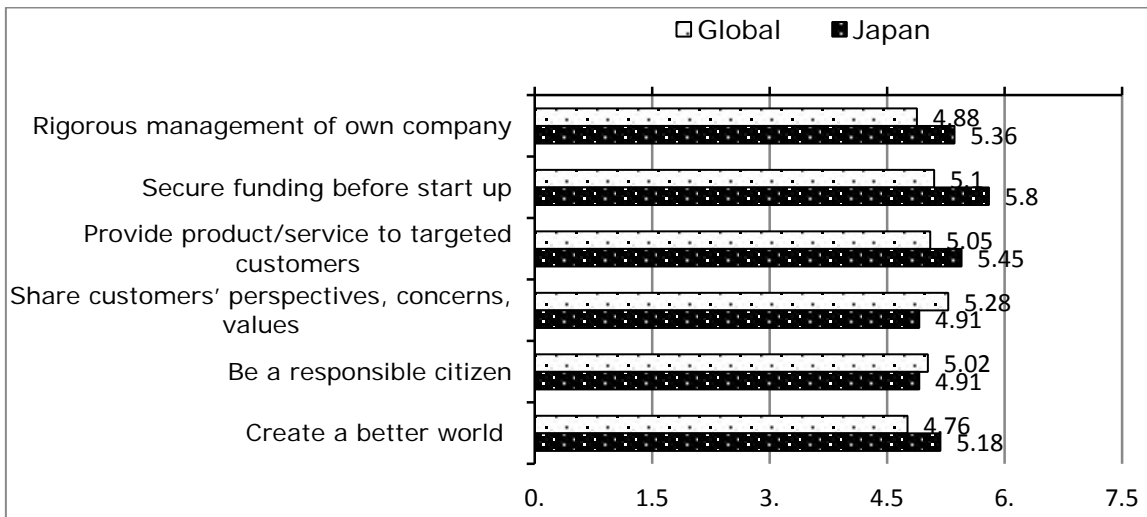
When asked about parental support, the score of Japan’s active founders (3.30) is close to the average of their global counterparts (3.34). On all other items, however, their scores are lower. Except for financial assistance, Japan’s active founders receive little support from their parents.

Figure 23. Motivations for Founding a Company (Active Founders)



Note: Average of scores from 1=Totally disagree to 7=Strongly agree

Figure 24. Essential Requirements for Company Founder



Note: Average of scores from 1=Totally disagree to 7=Strongly agree

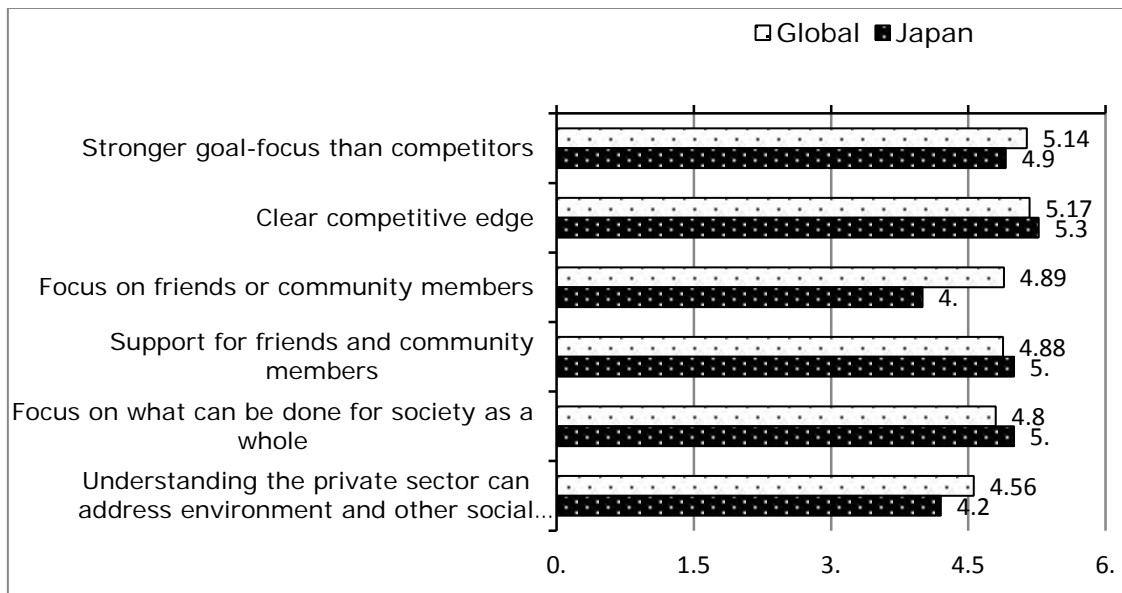
Except for “To make money and become rich,” Japan’s active founders score higher than the average of their global counterparts on all other items. When asked

about essential requirements for a company founder, Japan’s active founders score higher on “Rigorous management” (Global=4.88, Japan=5.36), “Secure funding before start up” (Global=5.10, Japan=5.80) , “Provide product/service to targeted customers”(Global=5.05, Japan=5.45), and “Create a better world”(Global=4.76, Japan=5.18).

When the topic is management perspective, Japan’s active founders score lower than their global counterparts on “Focus on friends or community members” (4.00 versus 4.89). On other items they are very similar.

It must be noted, however, that since the Japan sample contains only 11 individuals, there may be bias in their responses.

Chart 25. Active Founder Management Perspectives



Note: Average of scores from 1=Totally disagree to 7=Strongly agree

2.9 Summary

We have compared Global and Japanese data for the major results of GUESSS 2013. The results are consistent with other surveys and research in showing that Japan is lacking in entrepreneurial activity when compared to other countries. We see this same trend in GUESSS.

To conduct this survey in Japan, we turned for help to management and economics faculties, taking advantage of the network created by the Japan Academic Society for Ventures and Entrepreneurs (JASVE), to secure the assistance of academics interested in educating entrepreneurs. As a result, the probability is high that our sample is strongly biased toward students from universities that provide education for budding entrepreneurs. The majority of faculty who conducted the survey were, it is highly likely, also involved in teaching entrepreneurship and venture capital management. Both in sampling and in execution, our survey is thus strongly biased in favor of those comparatively familiar with entrepreneurship.

But despite these biases, the results reported here tend to be scores lower than those found in the global results. We can thus infer that few Japanese students are interested in entrepreneurship, receive instruction related to entrepreneurial activities, or are blessed with a university climate that stimulates entrepreneurship. While slightly more than 10% of the students in our sample plan to start companies, their preparations have not gone beyond gathering information and writing business plans. Almost none have proceeded further to such concrete steps as actual selling of products or services or raising funds from external sources.

3. Factors Increasing Entrepreneurial Intentions

Here we analyze the global data, looking for factors that increase student interest in starting companies. We examine entrepreneurial education and university climate that promotes entrepreneurship, attempting to grasp what forms of education and support will contribute to making students more entrepreneurial. Our intention is to utilize these results at major universities in Japan.

Figure 26. Model of Factors Influencing Entrepreneurial Intention

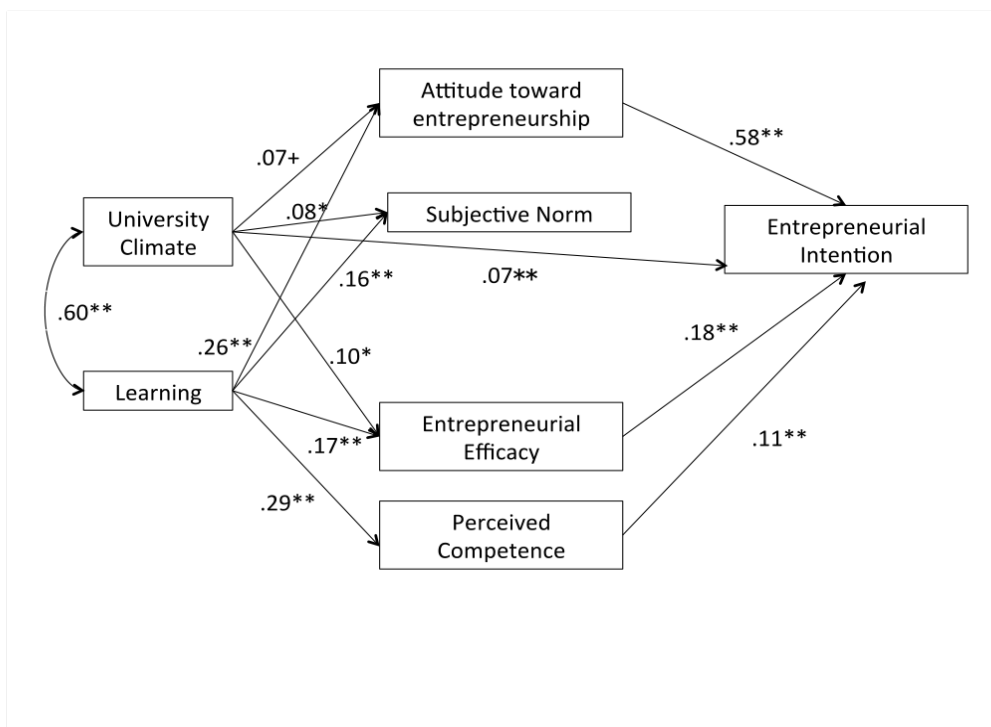


Figure 26 illustrates a model of how various factors affect entrepreneurial intention, the result on the righthand side of the diagram. This model is based on the Theory of Planned Behavior, but excludes factors that appear to be insignificant at the $p < .05$ [*] or $p < .001$ [**] levels.

Entrepreneurial Intention ($\alpha = .94$) is measured by six questions: whether the entrepreneur is ready to start a company; whether the entrepreneur has established

objectives for the business; whether he is ready to spare no effort in managing the company, has decided to start a company, is thinking seriously of starting a company, or feels strongly that he would like to start a company (Linan & Chen 2009).

University Climate ($\alpha = .90$) is measured by three questions: whether it promotes creation of ideas for new businesses, whether it is suitable for production of entrepreneurs, and whether the university provides backing for students' entrepreneurial activities (Franke & Lüthje 2004; Geissler, 2013).

Learning ($\alpha = .90$) is measured by five questions: does it deepen understanding of entrepreneurial stance, values and motivations; does it deepen understanding of activities required to start a business; does strengthen practical business skills; does it strengthen ability to create a broad network; does it strengthen ability to discover business opportunities (Souitaris et al., 2007).

Attitude ($\alpha = .90$) is measured by five questions intended to determine whether becoming an entrepreneur is seen as merit or demerit, whether a career as an entrepreneur is attractive, whether the individual will become an entrepreneur given an opportunity and financial resources (Linan & Chen 2009).

Subjective Norm ($\alpha = .82$) is the degree to which family, friends and other students approve of starting a company (Linan & Chen, 2009).

Entrepreneurial Efficacy ($\alpha = .89$) is measured by four questions that assess ability to successfully pursue a career working for oneself, ability to do all that is necessary for the business to succeed, and whether the chance of success is seen as very high (Souitaris et al., 2007).

Perceived Competence ($\alpha = .92$) is measured by eight questions that assess student perceptions of themselves as able to discover new business opportunities, create new products and services, display creativity, provide leadership, create a network of experts, and turn new ideas into business (Zhao et al. 2005; P. Weber; Forbes 2005/Chen 1998).

Let us look more closely now at the two variables on the lefthand side of the model: University Climate and Learning. University Climate has a strong, direct, positive correlation with Entrepreneurial Intention. It also affects Entrepreneurial Intention via indirect paths through Attitude and Entrepreneurial Efficacy. In contrast, Learning is not directly connected with Entrepreneurial Intention. Its influence is only indirect, via Attitude, Entrepreneurial Efficacy, and Perceived Competence. Of particular interest is the fact that while University Climate and Learning are positively correlated with Subjective Norm, there is no connection between Subjective Norm and Entrepreneurial Intention. Even when those surrounding a student approve of starting a company, this appears unrelated to the student's desire to become an entrepreneur.

4 . Conclusion

Reviewing results from GUESSS 2013, we have identified distinctive features of the Japanese sample and analyzed factors that influence entrepreneurial intention. We have learned that University Climate (atmosphere and support for entrepreneurial activities) is directly correlated with increasing entrepreneurial intentions. Unfortunately, the data from Japan reveal show that University Climate only stimulates creation of ideas for new businesses. Japanese students score higher than the global

sample only on this item. To strengthen Japanese students' entrepreneurial intentions, it will be necessary for Japanese universities to better appreciate students' entrepreneurial activities and provide support for students who wish to found companies.

We know that at present only a handful of Japanese students have founded companies or plan to do so. In Japan students' entrepreneurial activities are largely confined to writing business plans, conducting market research and product development, instead of actual sales or procuring external funding. Motivation to capture a large share of a niche market and contribute to society is stronger than that to make money and become rich or to build a company with a strong competitive edge. Because, however, our sample is small, whether these results apply to all Japanese students remains an open question.

Concerning GUESSSS 2015, we are hoping to see more lively involvement by Japanese students in entrepreneurial activities resulting from major changes in Japan's economic environment and government policy related to starting new companies.

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