The GUESSS 2021
Japanese National Report
(English Version)

January 2023

GUESSS　Japan Office

Noriko Taji, Hosei University

Tomoyo Kazumi, Senshu University

Yuki Tamai, Fukuyama City University

Makoto Fujimura, Fukuoka Jo Gakuin University

0. Introduction

The Global University Entrepreneurial Spirit Students' Survey (GUESSS) is a survey of entrepreneurial spirit among university and graduate school students conducted once every 2–3 years in approximately 50 countries throughout the world using a uniform questionnaire format with the Swiss Institute of Small Business and Entrepreneurship at Switzerland's St. Gallen University as its secretariat. The first survey was conducted in 2003; thus, this is the eighth survey conducted. The 2021 survey was administered three years after the previous survey in 2018 owing to the COVID-19 pandemic.

The 2021 survey covered 58 countries with 267,366 valid responses received, making it the highest so far in terms of the numbers of participating countries and valid responses.

Table 1. Number of Responses from All Participating Countries

Country	Number of responses	%	Country	Number of responses	%
1 Albania (ALB)	434	0.16%	30 Lebanon (LBN)	3,224	1.21%
2 Australia (AUS)	442	0.17%	31 Liechtenstein (LIE)	107	0.04%
3 Austria (AUT)	3,236	1.21%	32 Lithuania (LTU)	2,154	0.81%
4 Belgium(BEL)	2,296	0.86%	33 Mexico (MEX)	6,449	2.41%
5 Bolivia(BOL)	2,133	0.80%	34 Morocco (MAR)	1,265	0.47%
6 Brazil (BRA)	7,738	2.89%	35 Nepal (NEP)	137	0.05%
7 Bulgaria(BUL)	717	0.27%	36 Netherland (NED)	713	0.27%
8 Chile (CHI)	10,509	3.93%	37 New Zealand (NZL)	1,902	0.71%
9 Colombia (COL)	12,401	4.64%	38 Nigeria (NGR)	2,093	0.78%
10 Costa Rica (CRC)	5,469	2.05%	39 North Macedonia (MKD)	175	0.07%
11 Croatia (CRO)	1,660	0.62%	40 Norway (NOR)	8	0.00%
12 Czech Republic(CZE)	1,971	0.74%	41 Pakistan (PAK)	896	0.34%
13 Dominican Republic (DOM)	594	0.22%	42 Panama (PAN)	5,297	1.98%
14 Ecuador (ECU)	5,085	1.90%	43 Peru (PER)	14,948	5.59%
15 El Salvador (ESA)	768	0.29%	44 Poland (POL)	6,012	2.25%
16 England (ENG)	7	0.00%	45 Portugal (POR)	3,595	1.34%
17 Estonia (EST)	406	0.15%	46 Qatar (QAT)	121	0.05%
18 Finland (FIN)	1,094	0.41%	47 Republic of Korea (KOR)	1,220	0.46%
19 Germany (GER)	8,199	3.07%	48 Russia (RUS)	5,407	2.02%
20 Greece (GRE)	1,594	0.60%	49 Saudi Arabia (KSA)	2,921	1.09%
21 Hungary (HUN)	10,104	3.78%	50 Slovakia (SVK)	5,754	2.15%
22 Indonesia (IND)	2,545	0.95%	51 Spain (ESP)	98,226	36.74%
23 Iran (IRI)	867	0.32%	52 Sweden (SWE)	388	0.15%
24 Iraq (IRQ)	613	0.23%	53 Switzerland (SUI)	6,919	2.59%
25 Ireland (IRL)	103	0.04%	54 Tunisia (TUN)	342	0.13%
26 Italy (ITA)	3,294	1.23%	55 Ukraine (UKR)	43	0.02%
27 Japan (JAP)	3,494	1.31%	56 United Arab Emirates (UAE)	1,345	0.50%
28 Jordan (JOR)	3,237	1.21%	57 USA	1,843	0.69%
29 Kazakhstan (KAZ)	2,791	1.04%	58 Uruguay (URY)	60	0.02%
			Total	267,366	100%

Source: Created by the authors from the Global GUESSS Report 2021.

Survey Administration in Japan

Japan has been participating in the survey since 2011; the 2021 survey is its fifth time. This time, more than 35 universities participated, and 3,417 valid responses were received.[1] We sincerely thank everyone involved at the participating universities, who were navigating a difficult situation in holding classes during the COVID-19 pandemic.

The survey was in an online format, which student respondents accessed through a personal computer or smartphone to respond. We prepared flyers with the URL and the QR code of the survey's website and approached the students in their classes and elsewhere to ask them to take the questionnaire.

Table 2. Number of Valid Responses by University in Japan

University	Num.	Ratio	University	Num.	Ratio
Aichi Gakuin Univ.	3	0.1%	Nihon Univ.	29	0.8%
Atomi Gakuen Women's Univ.	90	2.6%	Hitotsubashi Univ.	12	0.4%
Osaka City Univ.	18	0.5%	Hiroshima Univ.	19	0.6%
Osaka Univ of Commerce	55	1.6%	Fukuoka Univ.	96	2.8%
Otaru Univ of Commerce	2	0.1%	Fukuoka Jogakuin Univ.	85	2.5%
Ochanomizu Univ.	10	0.5%	The Univ. of Fukuchiyama	1	0.0%
Gakushuin Univ.	18	0.5%	Fukuyama Univ.	1	0.0%
Kansai Univ.	94	2.8%	Fukuyama City Univ.	89	2.6%
Kyushu Univ.	132	3.9%	Hosei Univ.	579	16.9%
Keio Univ.	29	0.8%	Hokkaido Univ of Science	86	2.5%
Kobe Univ.	17	0.5%	Musashi Univ.	78	2.3%
Sophia Univ.	126	3.7%	Meiji Univ.	45	1.3%
Setunan Univ.	41	1.2%	Yokohama City Univ.	495	14.5%
Senshu Univ.	408	11.9%	Ritsumeikan Univ.	172	5.0%
Chuo Univ.	22	0.6%	Ryukoku Univ.	1	0.0%
Univ. of Tokyo	9	0.3%	Waseda Univ.	16	0.5%
Tokyo Inst of Technology	99	2.9%	Others	359	10.5%
Tohoku Univ.	81	2.4%	Total	3417	100.0%

Source: Created by the authors.

[1] For Japan, the number of valid responses is the number of responses after data cleaning; hence, this does not correspond to the number of responses given in the Global GUESSS Report 2021.

1. Basic data on respondents

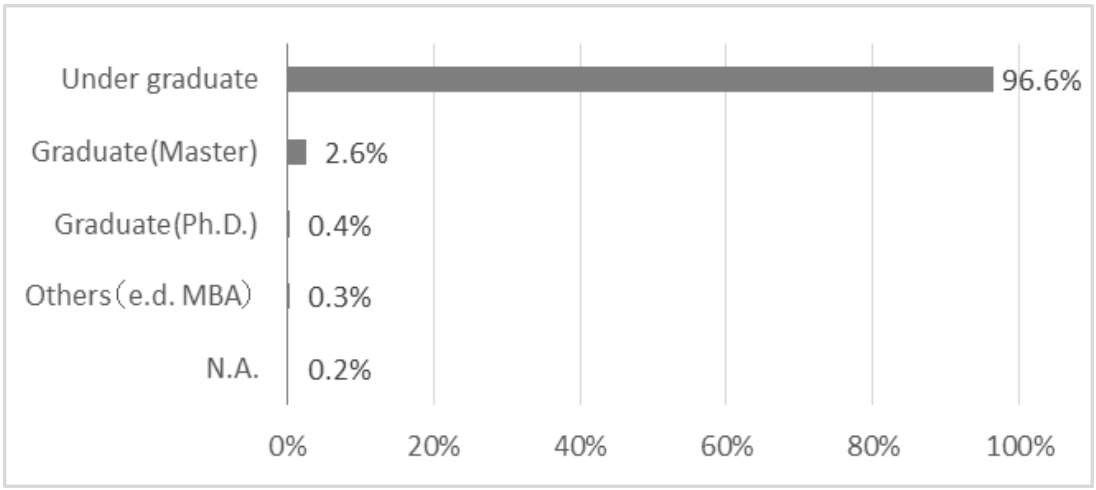
1.1 Gender

Respondents comprised 44.8% females, 54.3%males, and 0.7% other whereas 0.1% did not respond. This compares with females comprising 60.3% of the respondents worldwide.

1.2 Educational level

The educational levels of respondents were 96.6% undergraduates, 2.6% graduate students in master's programs, 0.4% in doctoral programs, and 0.3% in professional graduate programs (e.g., MBA).

Figure 1. Academic attainment of respondents

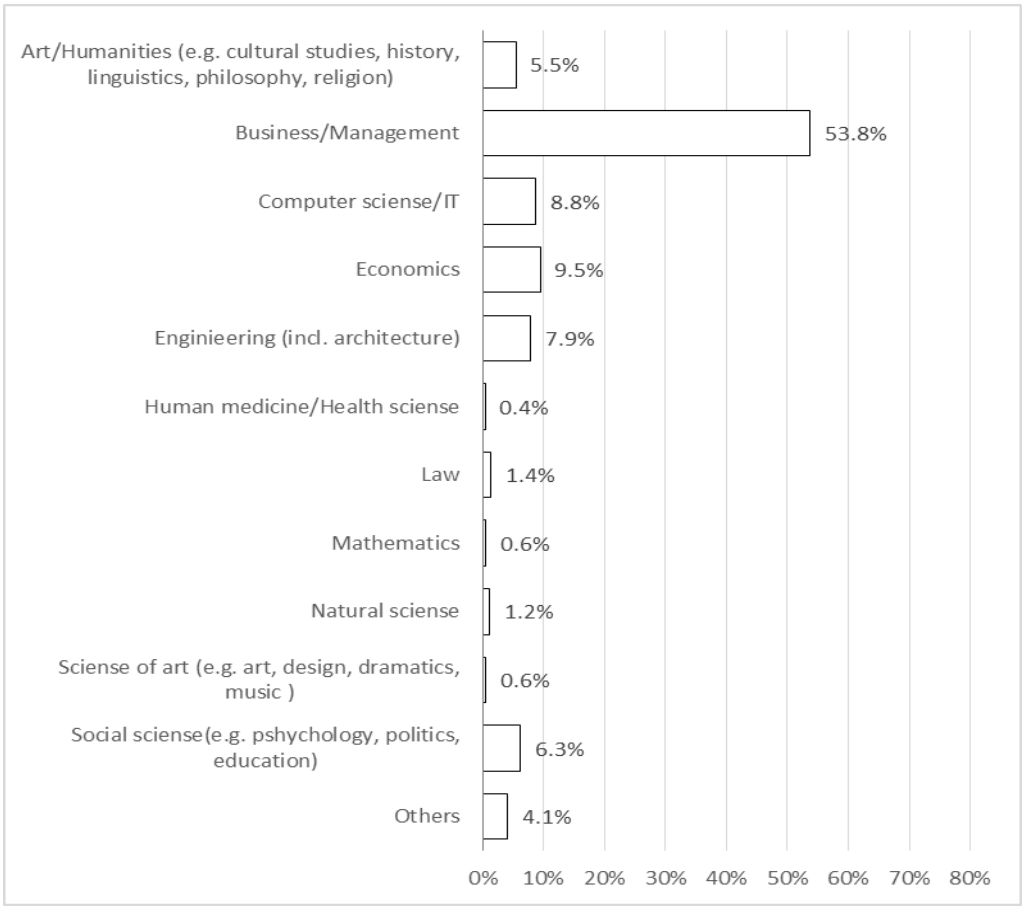


Source: Created by the authors. N=3,417

1.3 Respondents' majors

We asked respondents about the academic fields they were studying. Commerce and business administration was the most common at 53.8% of the total, followed by economics at 9.5%, engineering (including architecture) at 7.9%, computer science/information technology (IT) at 8.8%, and social sciences at 6.3%. Compared with global respondents, there is a tendency of a much higher percentage majoring in commerce and business administration whereas lower in science and engineering majors.

Figure 2. Main fields of study of respondents



Source: Created by the authors. N=3,417

1.4 Nationalities

Not all respondents were of Japanese nationality; some were foreign exchange students. Table 3 reports respondents' nationalities. Those who did not respond were the most numerous, perhaps because this time the survey used a drop-down selection menu to record the responses.

Table 3. Respondents' nationalities in the Japanese survey

Nationality	n	%
Japan	1,870	54.7%
China	38	1.1%
South Korea	7	0.2%
Vietnam	3	0.1%
Other	13	0.4%
No response	1,486	43.5%

Source: Created by the authors.

1.5 Respondents' entrepreneurial status

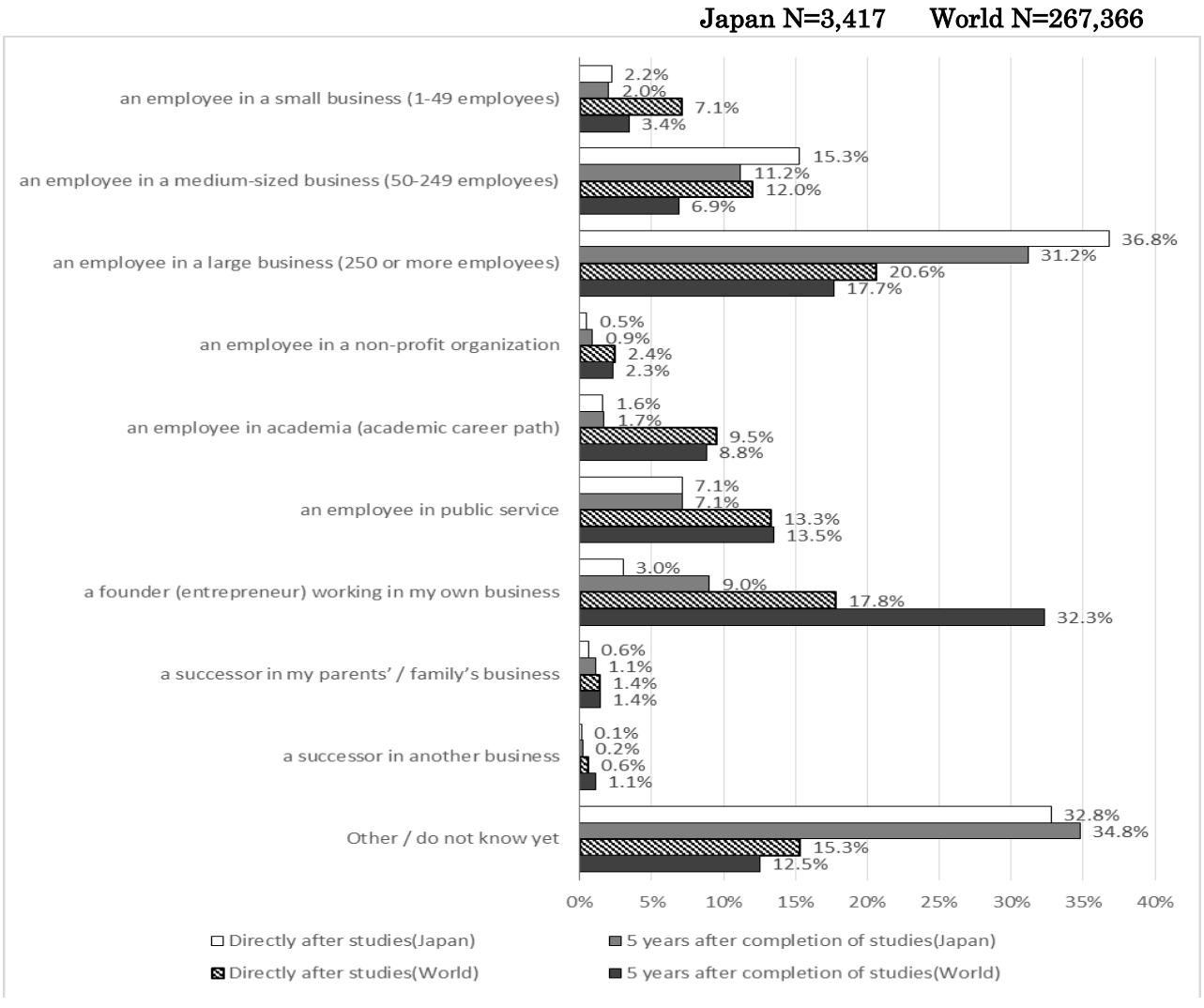
In the 2021 survey, 1.5% of the respondents had already started a business or were self-employed whereas 4.9% were nascent entrepreneurs. This compares with 10.8% running their own business and 28.4% nascent entrepreneurs worldwide. This implies that very few Japanese students had started a business or were at the nascent stage.

2. Career Choice Intentions

2.1 Post-graduation career choice

We asked respondents about their intended career choices immediately after graduation and five years following graduation. Excluding those who responded "other or don't know," the most frequent response was "to work at a large business of 250 or more employees." On the contrary, on a global level, while working at a large business was the most frequent response for fresh graduates, the most frequent response for five years later was "to be running their own business as a founder."

Figure 3. Detailed career choice intentions (Japan, World)



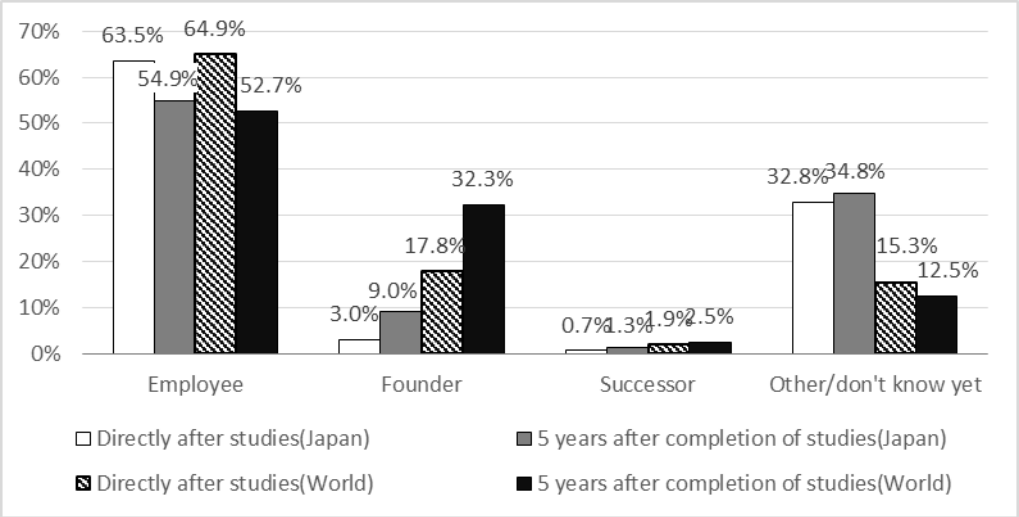
Source: Created by the authors.

2.2 Desired type of work after graduation and status of entrepreneurial preparation

Regarding their desired work type immediately after graduation and five years later, in both cases, the most frequent choice of Japanese respondents was to be an employee, whereas for global respondents, being an entrepreneur was the second most frequent response for five years later, after employee.

Figure 4. Career choice intentions in Groups (Japan, World)

Japan N==3,417 World N=267,366

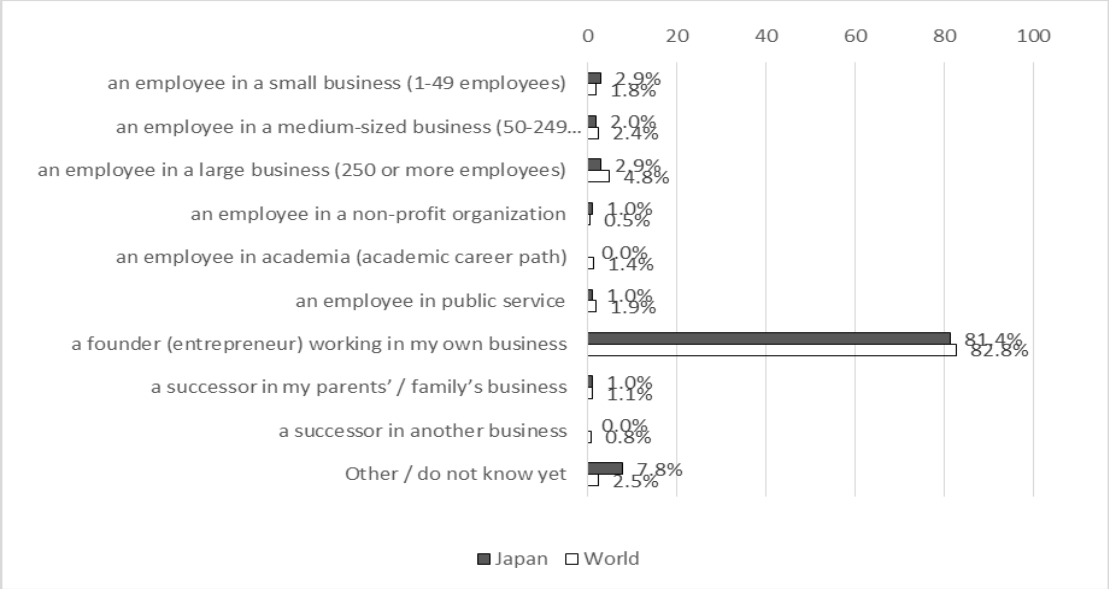


Source: Created by the authors.

For both Japanese and global respondents, being an entrepreneur was the most desired type of work five years after graduation for those who chose to become entrepreneurs immediately after graduation.

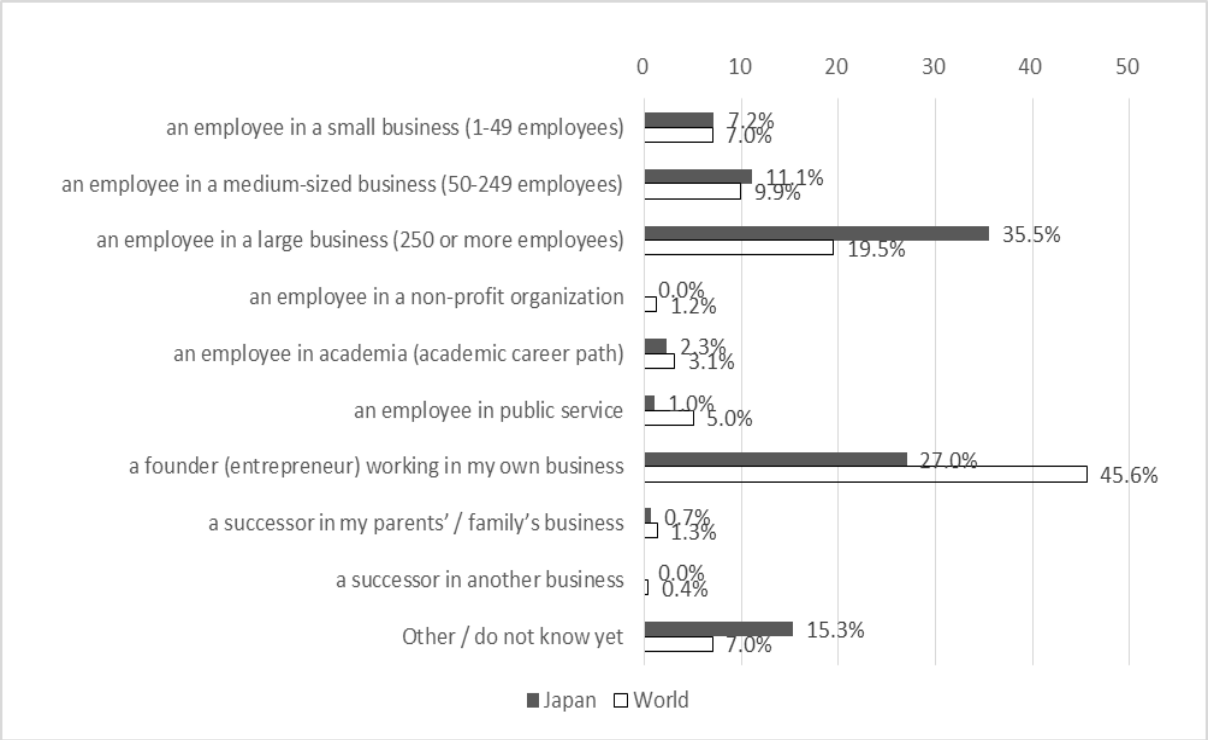
Figure 5. The career plans of direct intentional entrepreneurs 5 years later (Japan, World)

Japan N==3,417　　World N=267,366



Conversely, for the desired type of work immediately after graduation for those who responded that they would be running their own business as its founder five years later, the most frequent response among Japanese respondents was to work at large businesses whereas for global respondents, it was to be an entrepreneur. Even Japanese students who think that they may want to become entrepreneurs in the future seem to not want to start up a business immediately after graduation, but to first get a job at a company to acquire knowledge about business and organizational management skills. In the 2018 survey, 45.4% reported that they wanted to work for large businesses immediately after graduating whereas 10.8% reported that they wanted to become entrepreneurs immediately after graduating. In the 2021 survey, however, those who wanting to work at large businesses decreased, while those who wanting to become entrepreneurs immediately increased by as much as 16.2 percentage points.

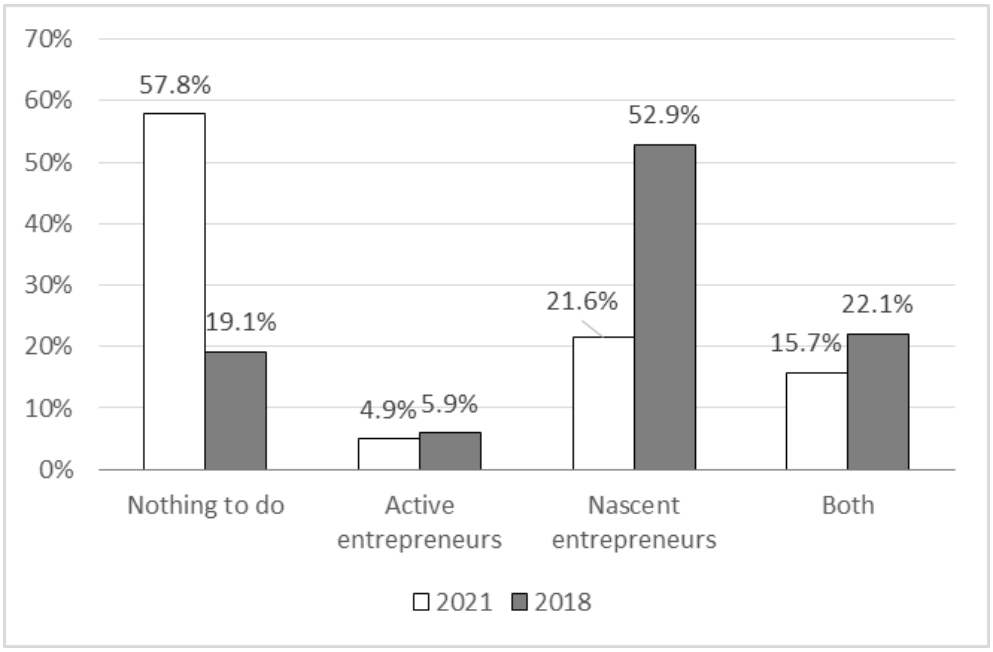
Figure 6. The career plans of 5 years later intentional entrepreneurs directly after studies (Japan, World) **Japan N==3,417 World N=267,366**



Source: Created by the authors.

Among the Japanese respondents, the status of the preparation of starting businesses by those who plan to become immediately after graduation was as follows. The Global Report did not include the global data on this; hence, we will compare it with the 2018 survey data in Japan. Those who responded that they were "doing nothing" accounted for 57.8%, which is significantly higher than that in the 2018 survey.

Figure 7. Entrepreneurial activities of directly after studies intentional entrepreneurs (Japan)



Note: We asked participants two questions: "Are you currently planning to start a company or your own business?" and "Are you already running your own company/business or self-employed?" Those who responded "yes" to both of these questions were grouped under "both" in our calculation; those who responded "yes" to the first question were grouped under "nascent entrepreneurs"; those who responded "yes" to the second question were grouped under "active entrepreneurs"; and those who responded "no" to both of these questions were grouped under "doing nothing."

Source: Created by the authors.

3. Entrepreneurial Activities

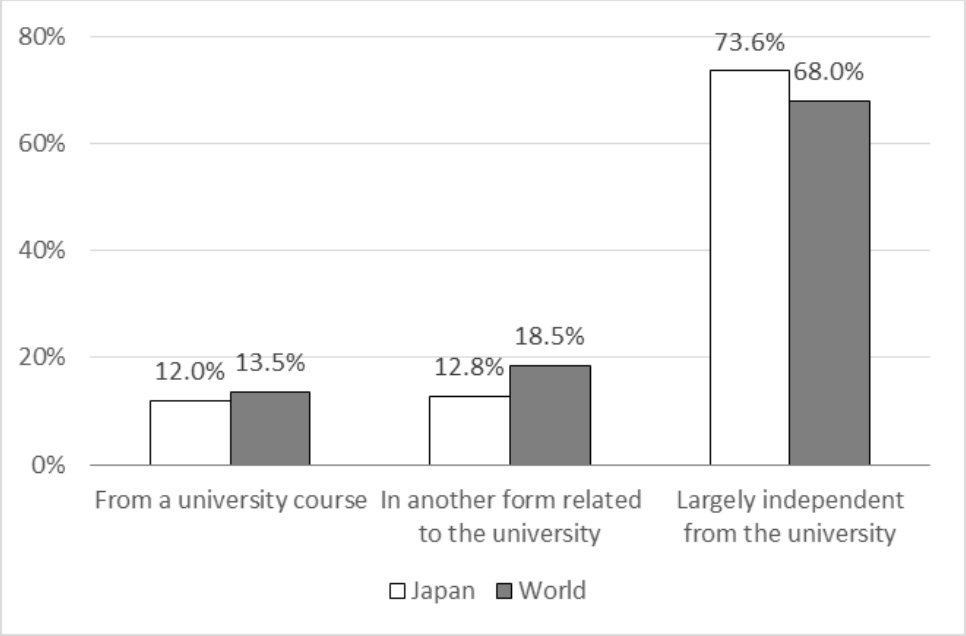
3.1 Nascent entrepreneurs

Nascent entrepreneurs comprised 4.9% of the total respondents (compared with 28.4% globally). When asked about the inspiration behind starting the business they were planning, 73.6% of Japanese respondents reported that "it had nothing to do with the university," while those who reported it was "courses at the university" or "other places related to the university" were lower than the global percentage (Figure 8).

Those who were currently in the process of preparing to establish a business, who also had the experience of having founded other businesses constituted 13.6% of the Japanese respondents and 15% of the global respondents, indicating that serial entrepreneurs do exist in Japan, albeit at a lower rate than globally.

Moreover, among those preparing to establish a business, 44.0% of the Japanese respondents and 47.4% of the global respondents thought that the business they will establish after graduation would become their primary occupation. This shows that Japanese students and students around the world who are already preparing to establish businesses share the same attitudes.

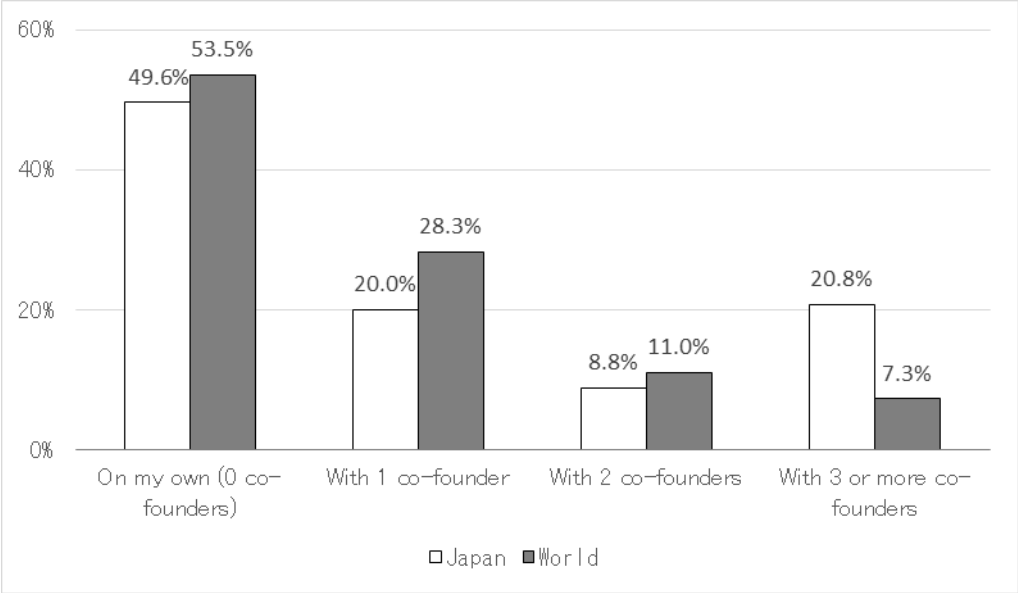
Figure 8. Background circumstances to establish business by nascent entrepreneurs (Japan, World) **Japan N=125, World N=50,887**



Source: Created by the authors.

For the number of cofounders of businesses at the preparation stage, 49.6% responded that they would do so "alone" accounting for the largest percentage, followed by "three or more co-founders" at 20.8%, and "one co-founder" at 20.0%. Compared with global respondents, more Japanese respondents plan to establish businesses with a team of four or more people, including themselves.

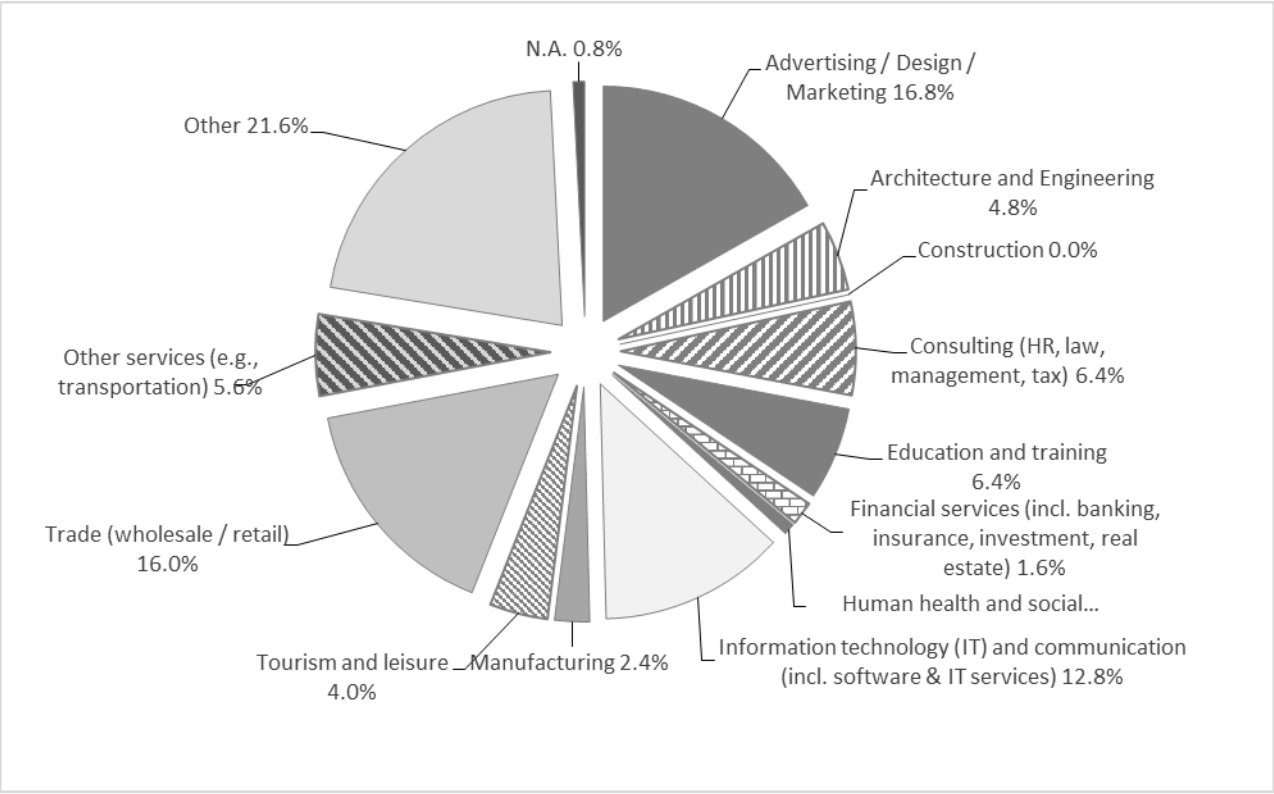
Figure 9. Number of co-founders of businesses being prepared (Japan, World)
Japan N=125, World N=51,949



Source: Created by the authors.

The distribution by industry of businesses being planned by nascent entrepreneurs (in Japan) is as follows.

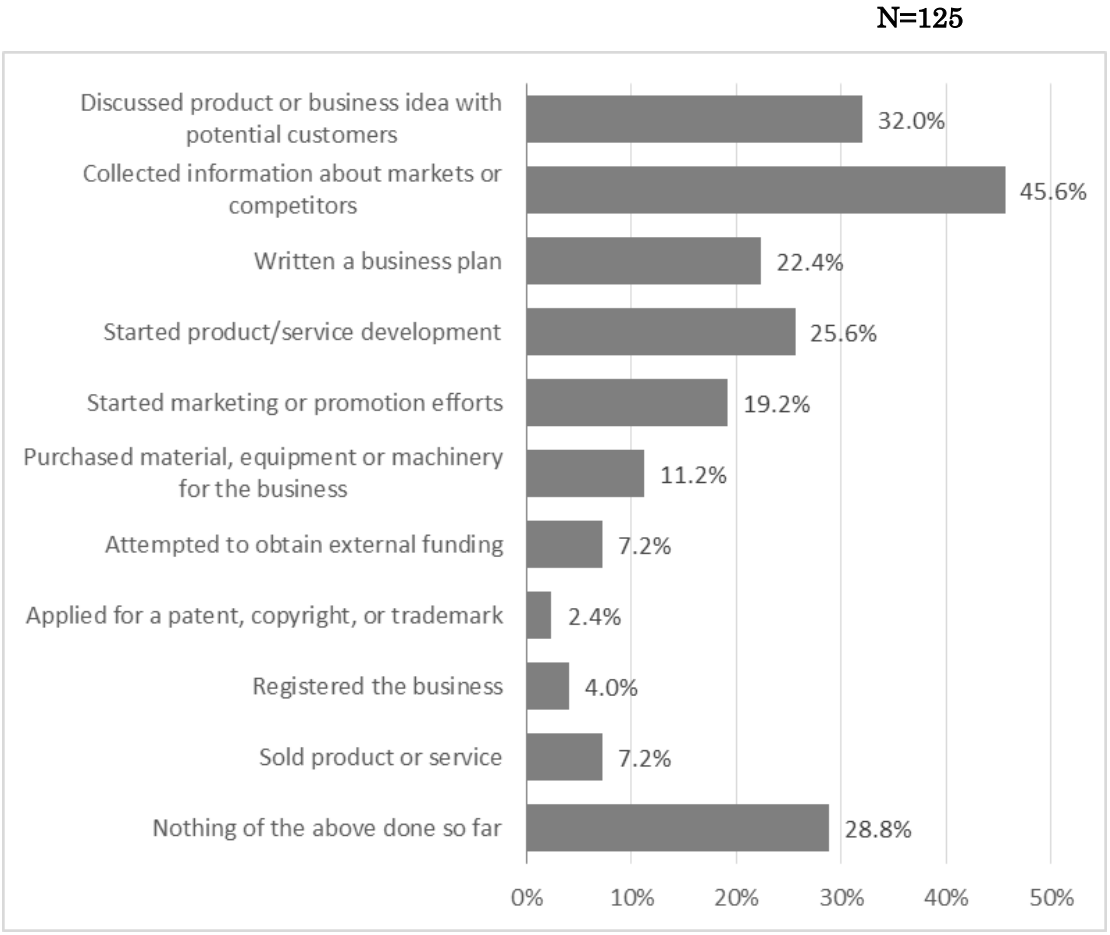
Figure 10. Industries in which nascent entrepreneurs planned to establish businesses (Japan) N=125



Source: Created by the authors.

When asked about of the preparations to start entrepreneurial activities, 45.6% of the respondents, the highest percentage, reported that they were "gathering information regarding the market and competition," followed by 32.0% of those who reported that they were "discussing products and business ideas with key customers." In the 2018 survey, the highest response was "doing nothing" at 42.0%, so the current survey found that respondents were at least gathering information for starting up a business.

Figure 11. Types of entrepreneurial preparation activities (Japan)



Source: Created by the authors

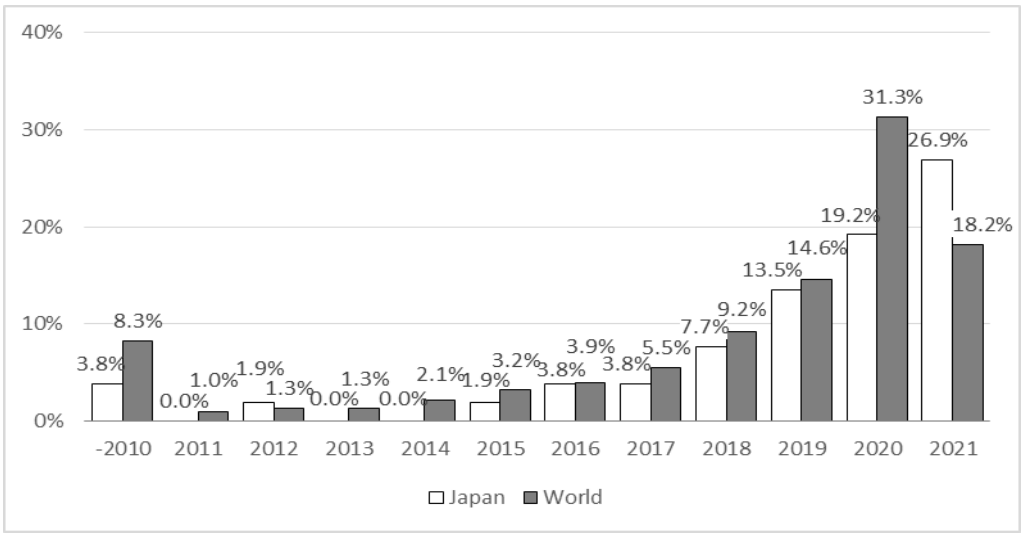
3.2 Active entrepreneurs

In the 2021 survey, only 1.5% of the respondents had already started a business. This is a big difference from the 10.8% global students who were active entrepreneurs.

On a global level, 31.3% of the businesses, or approximately one third, were established in 2020. In Japan, 2021 was the year with the highest percentage of start-ups at 26.9%, followed by 2020 at 19.2%. Regarding the number of co-founders, "no co-founders (only the founder)" accounted for 50.0% or half in Japan (compared with 37.3% globally). Those who responded "one co-founder" were 23.1% (vs. 29.7% globally), while those who responded "two co-founders" were 13.5% (vs. 18.8% globally), suggesting that most Japanese respondents were sole entrepreneurs.

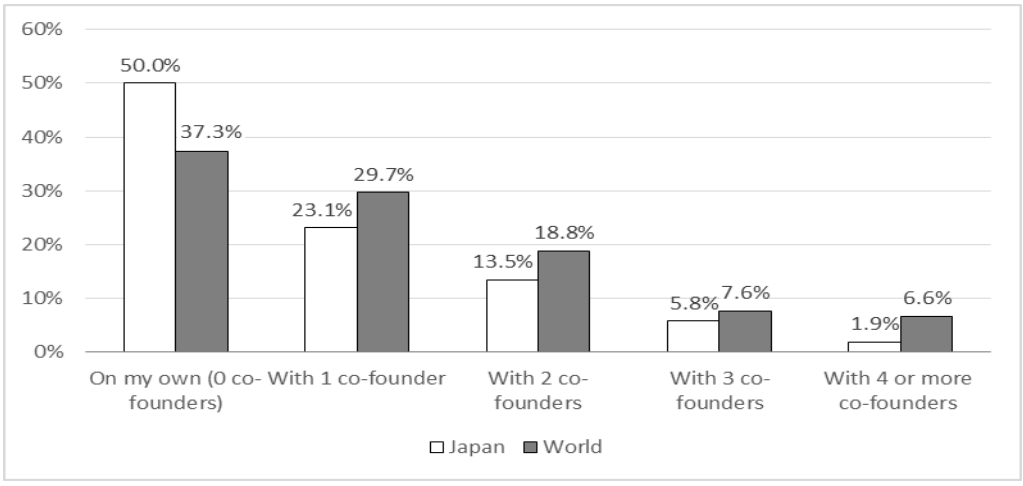
When we asked those who had already started a business while a student about the number of employees at the company, the most frequent response was 0 (the founder only) at 23.1%, and 96.2%, the vast majority, had five or fewer employees (Japan).

Figure 12. Year of business establishment by active entrepreneurs (Japan, World)
Japan N=52, World N=25,050



Source: Created by the authors.

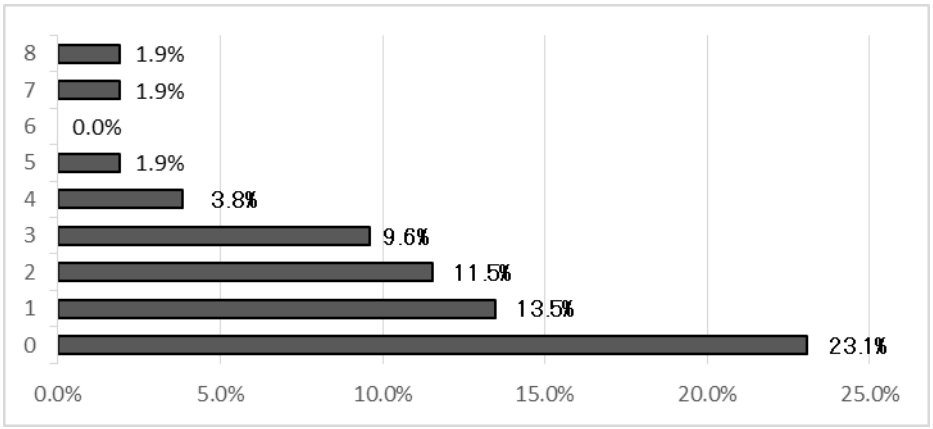
Figure 13. Number of co-founders of active entrepreneurs' business (Japan, World)
Japan N=52, World N=27,319



Source: Created by the authors.

Figure 14. Number of employees at businesses managed by respondents (Japan)

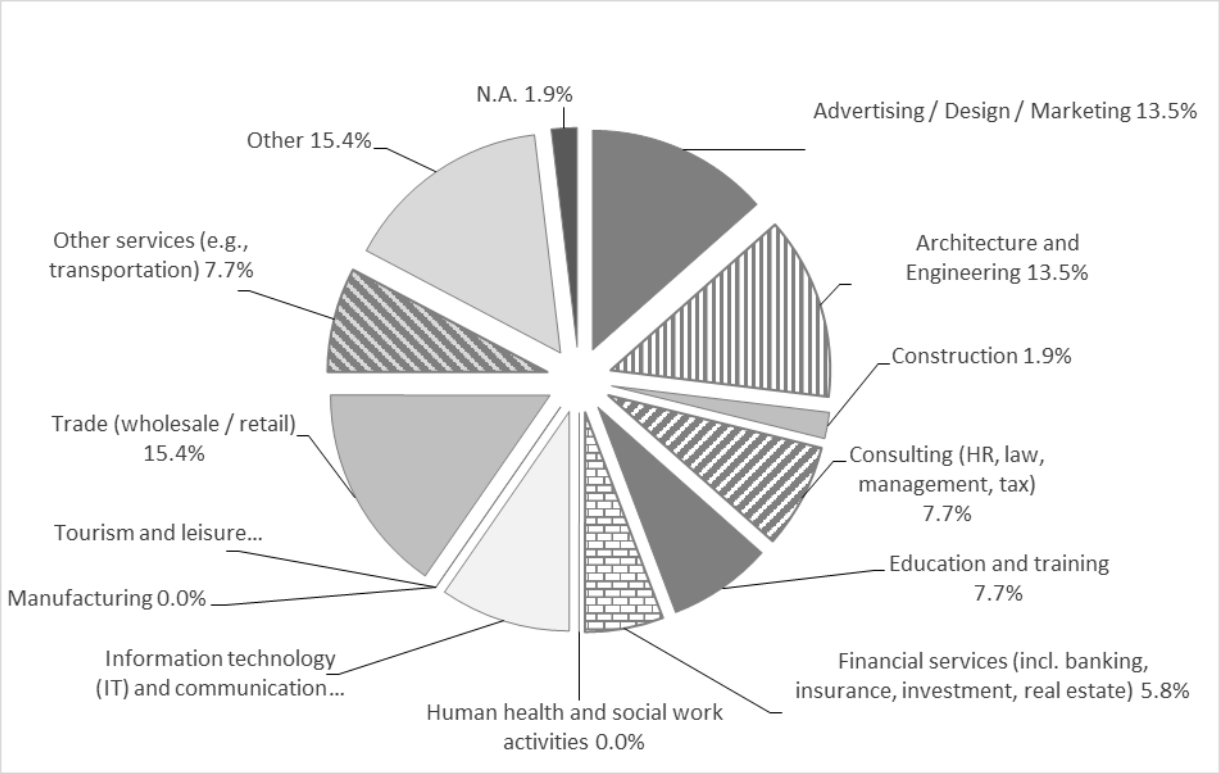
N=52



Source: Created by the authors.

The business fields in which active entrepreneurs are engaged in are as follows (Japan).

Figure 15. Business fields of entrepreneurial businesses (Japan) **N=52**



Source: Created by the authors.

The performance of businesses managed by active entrepreneurs was evaluated using a Likert scale of 1 (very poor)–7 (very good) for sales growth, expansion of market share, profit growth, job creation, and innovativeness compared with other businesses with similar products and services. The averages for each metric are presented in Table 4. The average for all five performance metrics was 3.89, and 18.8% of the active entrepreneurs scored 5 or above out of 7. However, the global average for these five metrics was 4.54, and approximately 36% of the entrepreneurs scored 5 or above, showing higher evaluations than in Japan (Figure 15).

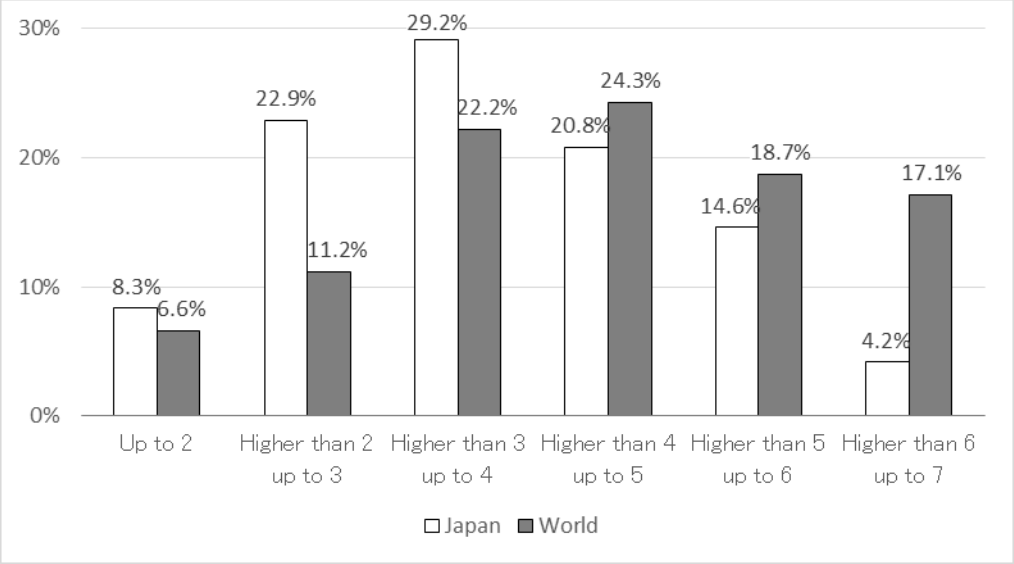
Table 4. Performance of businesses managed by active entrepreneurs (Japan)

Performance metric	Average	Std. deviation
Sales growth	4.10	1.653
Expansion of market share	3.83	1.602
Profit growth	4.25	1.657
Job creation	3.27	1.608
Innovativeness	3.98	1.631

Source: Created by the authors.

Figure 16. Performance evaluation of active entrepreneurs' businesses (Japan, World)

Japan N=48, World N=27,343



Source: Created by the authors.

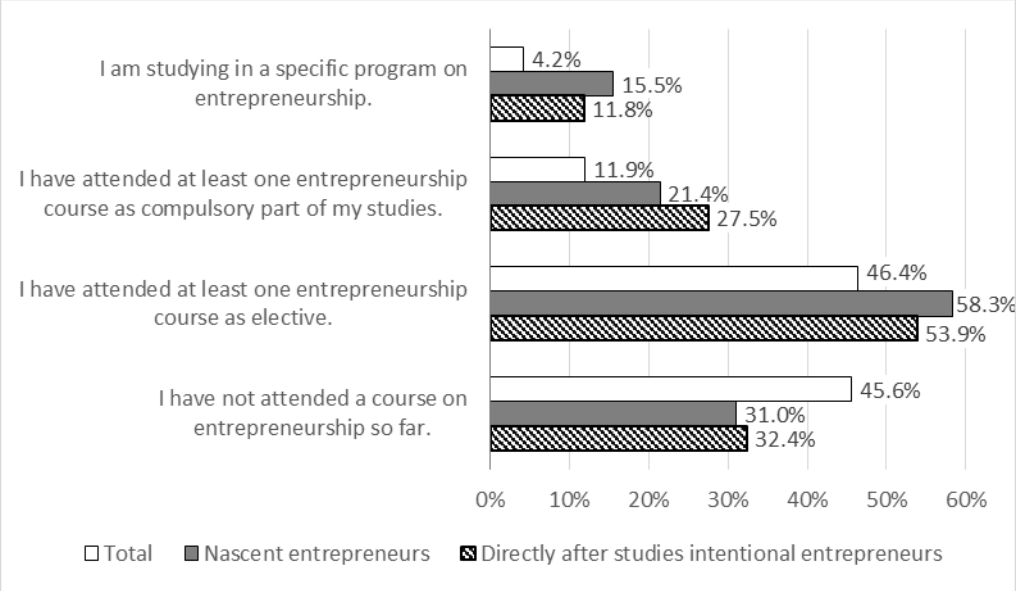
4. Analysis of Influencing Factors

4.1 Entrepreneurial education in universities

We asked the respondents about the entrepreneurial education they received at university. Globally, the largest proportion of the respondents (53.3%) reported that they had "never taken a course on entrepreneurial activities" whereas in Japan, 46.4% of the respondents reported they had "taken one or more courses," slightly more than the 45.6% of those who reported that they had "not taken any such courses."

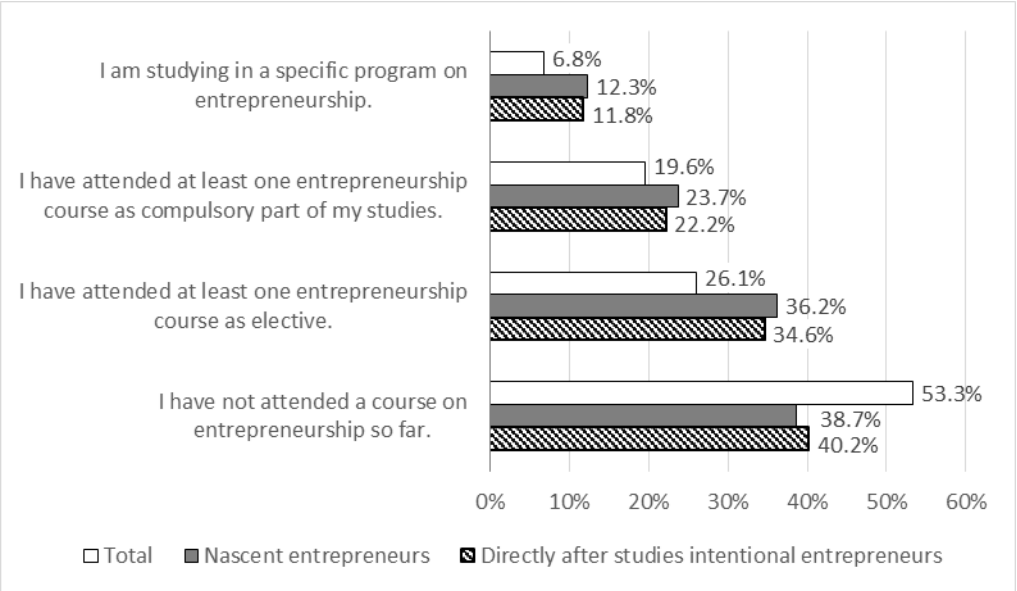
In addition, among those who were preparing to establish a business or wishing to establish a business immediately after graduation, both globally and in Japan, a high percentage of the respondents chose from the following options: "now taking a special program on entrepreneurship activities," "have taken one or more elective courses on entrepreneurship activities" or "have taken one or more required courses on entrepreneurship activities" (Figures 17 and 18).

Figure 17. Rate of enrollment in entrepreneurial education programs (Japan)
N=3,417



Source: Created by the authors.

Figure 18. Rate of enrollment in entrepreneurial education programs (World)
N=267,366



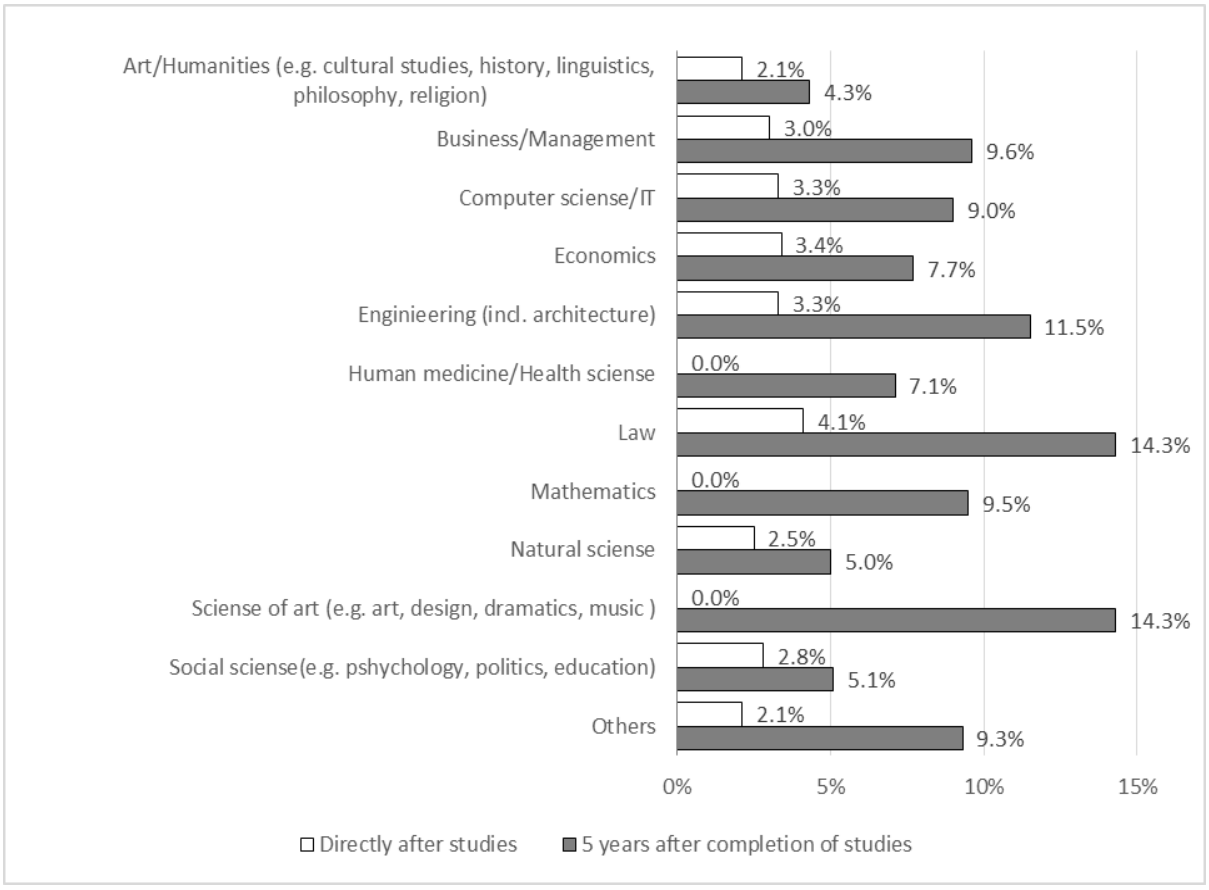
Source: Created by the authors.

4.2 Majors

We compared entrepreneurial intentions immediately after and five years after graduation by their majors at university. In Japan, for both immediately after and five years after graduation, entrepreneurial intentions were highest among students majoring in law; however, it should be noted that the sample size was very small. For immediately after graduation, the majors that ranked high were economics, computer science/IT, engineering, and commerce and business administration. For entrepreneurial intentions after five years, those with the highest figures were arts and literature, engineering, and commerce and business administration (Figure 18).

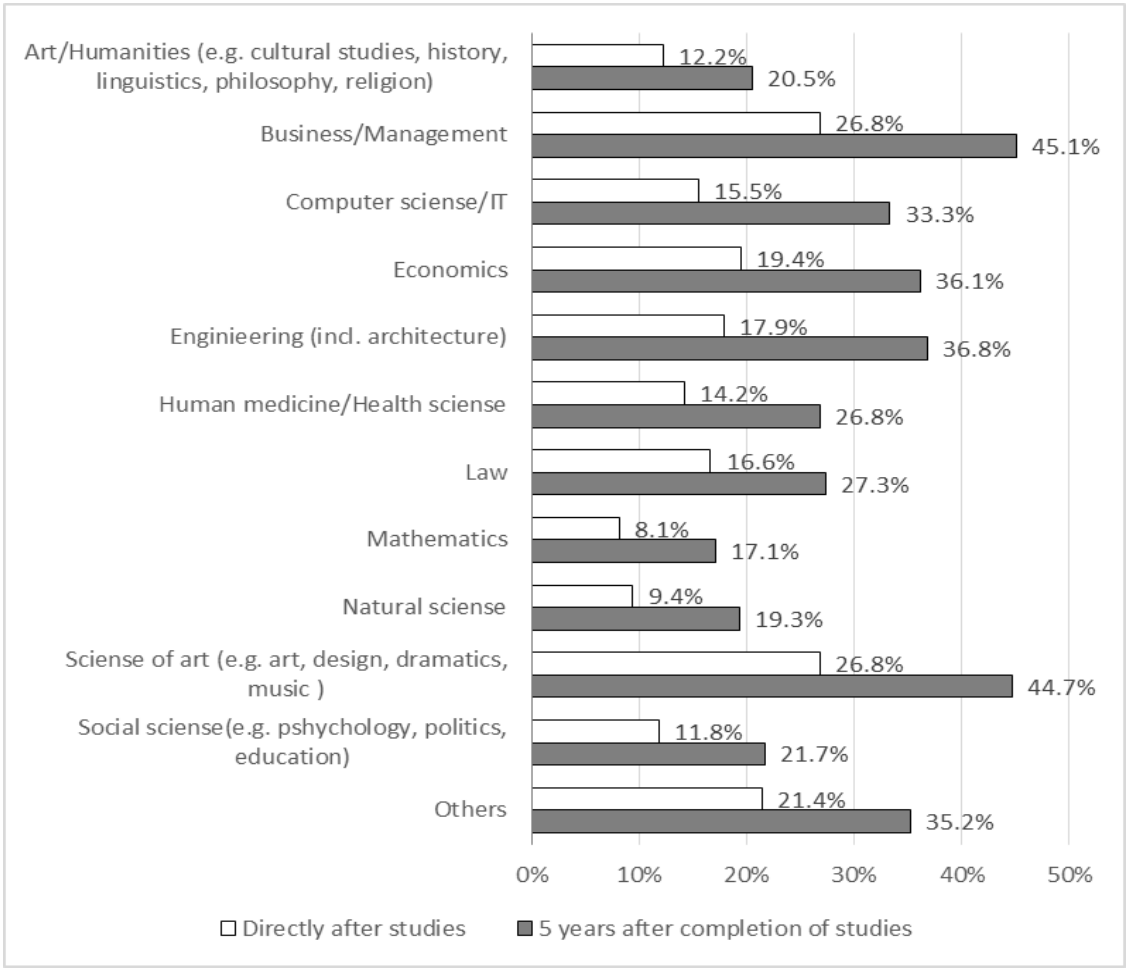
Globally, the most popular major among students with entrepreneurial intentions immediately after and five years after graduation was commerce and business administration, followed by arts and literature (Figure 19).

Figure 19. Ratio of those with entrepreneurial intentions by major (five years after and directly after studies, Japan) **Directly after studies N=102, 5 years after N=307**



Source: Created by the authors.

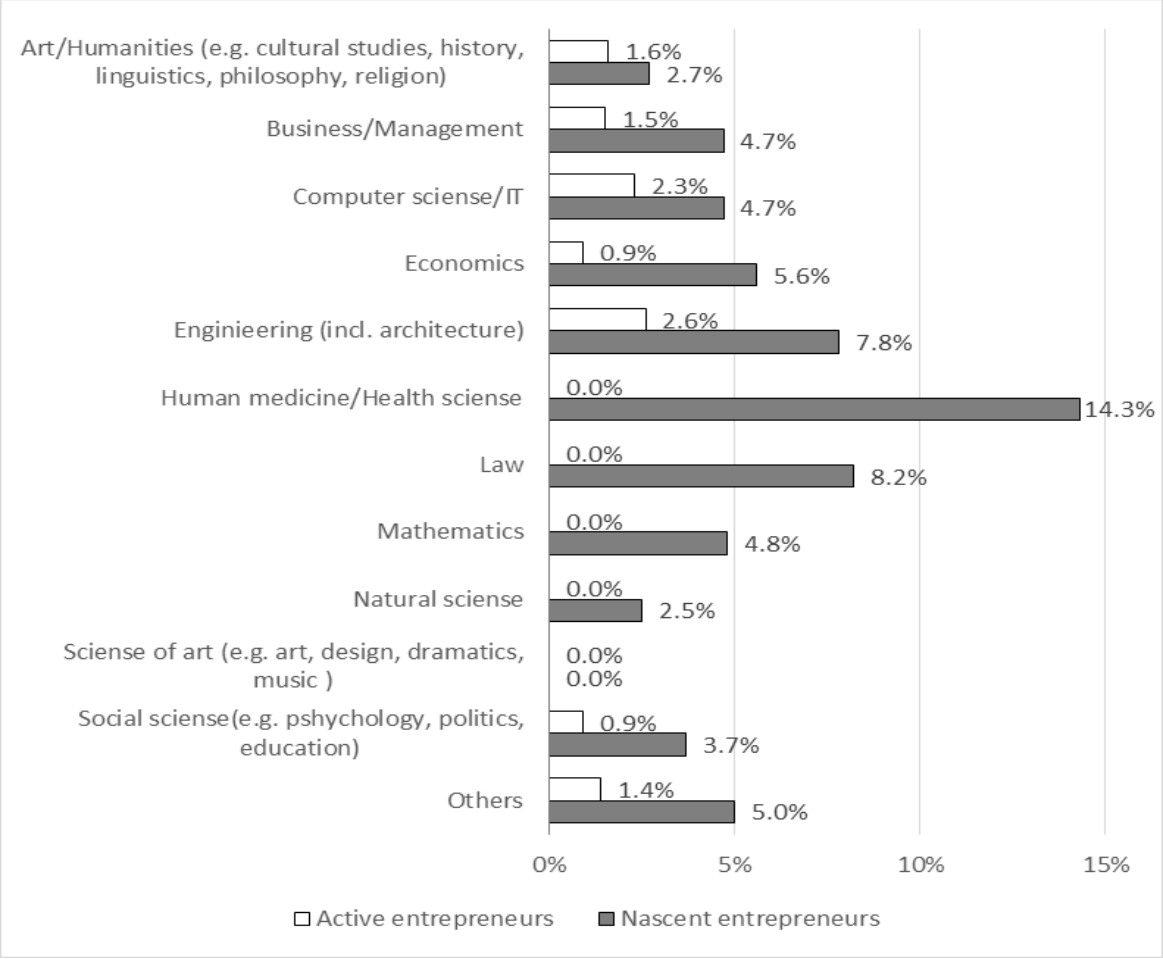
Figure 20. Ratio of those with entrepreneurial intentions by major (five years after and directly after studies, World)　N=267,244



Figures 21 and 22 analyze entrepreneurial activities (of nascent entrepreneurs and active entrepreneurs) by major. While entrepreneurial activities are at low levels in Japan overall, nascent entrepreneurs are more common in fields such as medicine, law, and engineering. Worldwide, students majoring in commerce and business administration and in arts and literature show higher ratios, for both nascent entrepreneurs and active entrepreneurs, similar to entrepreneurial intentions after graduation.

Figure 21. Entrepreneurial activities by major (Japan)

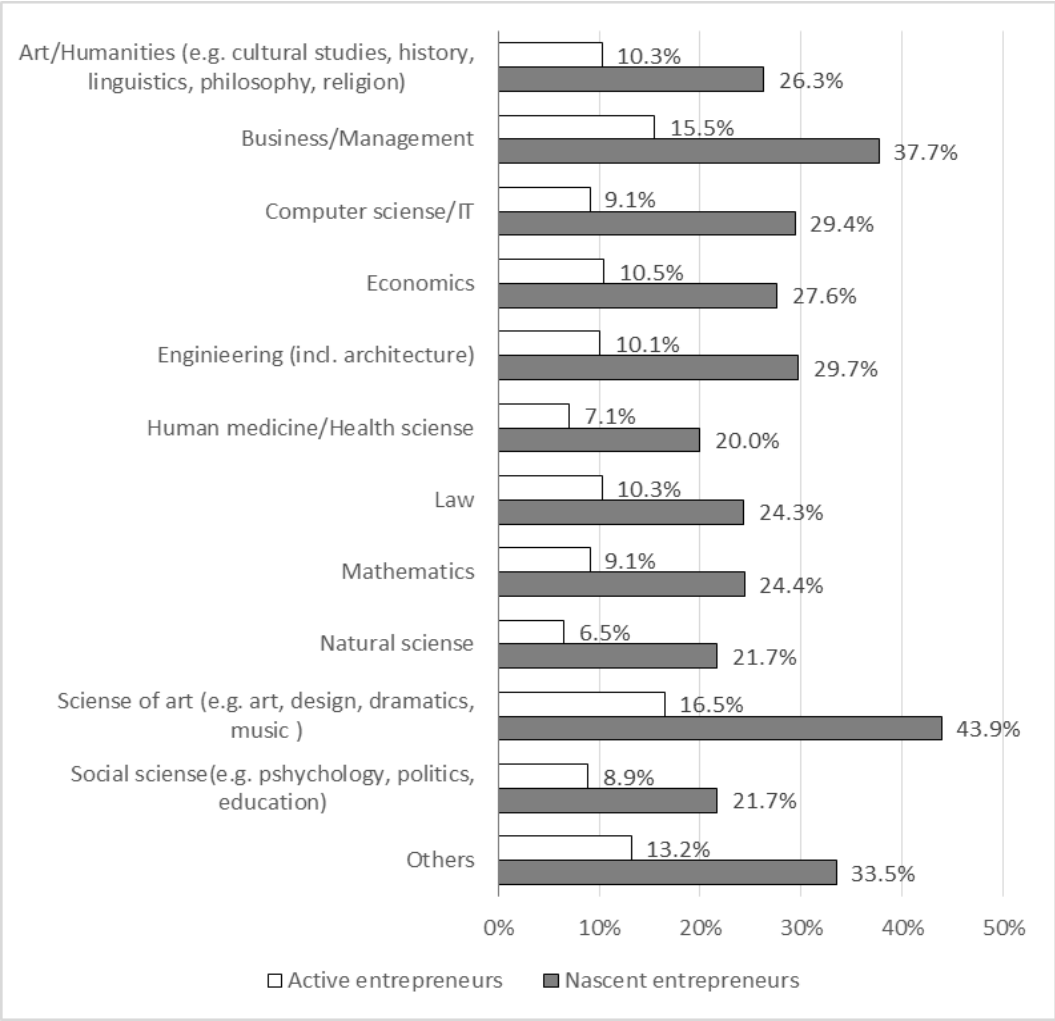
Active N=52, Nascent N=125



Source: Created by the authors.

Figure 22. Entrepreneurial activities by major (World)

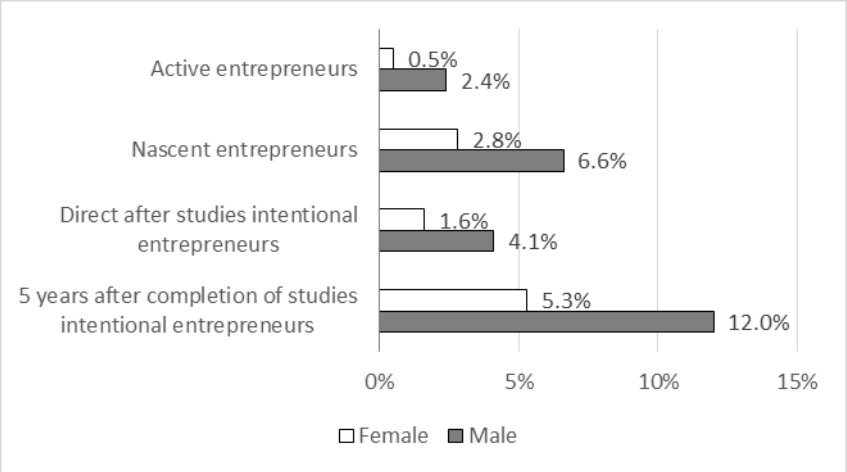
N=267,244



4.3 Gender

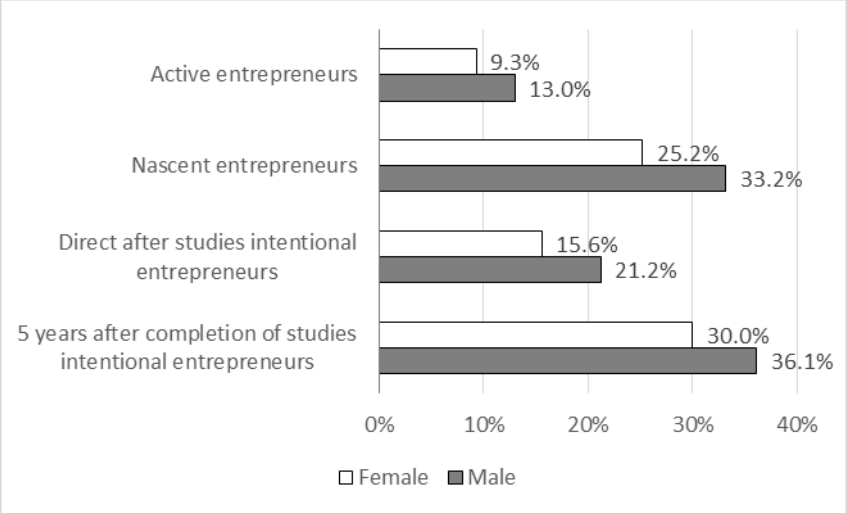
Looking at gender differences in entrepreneurial activities and intentions immediately after and five years after graduation, in Japan, women responded with less than half the percentages than that of men whereas globally, the ratio was 70%–80% indicating only a slight difference between the genders for entrepreneurial intentions and activities.

Figure 23. Gender differences in ratios having entrepreneurial activities and entrepreneurial intentions (Japan)



Source: Created by the authors.

Figure 24. Gender differences in ratios having entrepreneurial activities and intentions (World)



4.4 Family circumstances

The Global GUESSS Report 2021 does not comprise data on whether respondents' parents are self-employed; therefore, we only present the aggregate results for Japan here. Table 5 shows the percentage of the Japanese respondents having one or both parents who are self-employed. The distribution trend is more or less the same as in the 2018 survey.

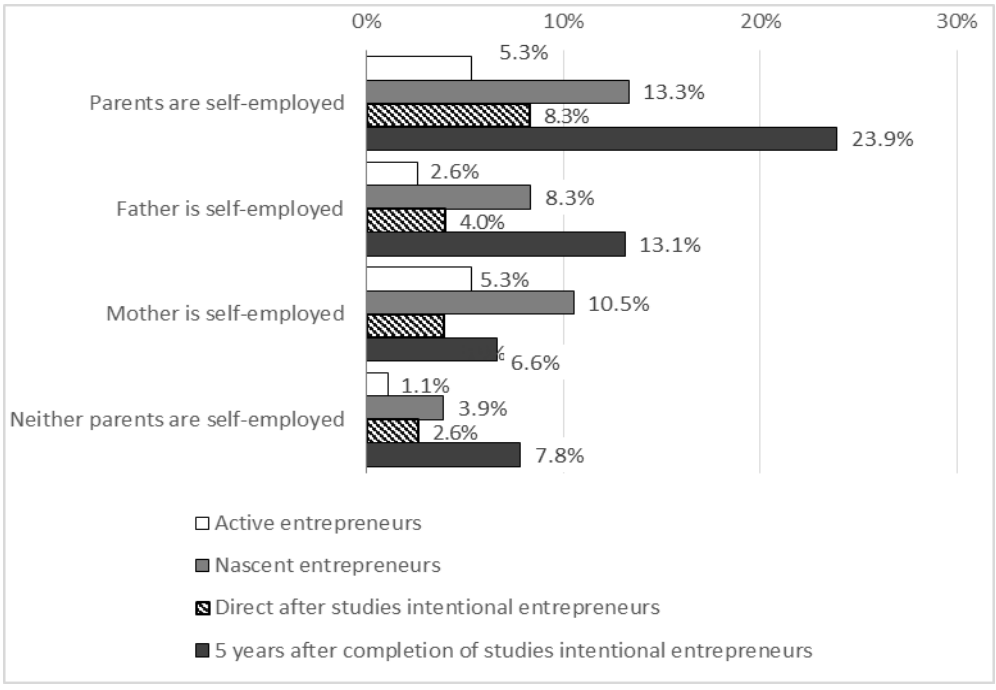
Table 5. Ratio of those whose parents are self-employed (Japan), 2021-2018

	2021 survey	2018 survey
Neither parent is self-employed	82.1%	79.9%
Father is self-employed	12.3%	14.8%
Mother is self-employed	2.2%	2.1%
Both parents are self-employed	3.3%	3.3%

Source: Created by the authors.

Looking at the relationship between whether a respondent's parents are self-employed and the respondent's entrepreneurial activities and post-graduation entrepreneurial intentions, both post-graduation entrepreneurial intentions and actual entrepreneurial activities were the highest when both parents were self-employed. When the father was self-employed, entrepreneurial intentions immediately after and five years after graduation were high, but ratios of nascent entrepreneurs and active entrepreneurs were higher when the mother was self-employed.

Figure 25. Whether parents are self-employed and respondents' entrepreneurial activities and post-graduation entrepreneurial intentions (Japan)



Source: Created by the authors.

5. The Impact of the COVID-19 pandemic

The first case of COVID-19 was found in December 2019, and the first case in Japan was confirmed in January 2020. COVID-19 then spread throughout the world, and a number of pandemics ensued, exerting a major impact on people's lives and economic activities. Thus, there is a possibility that the businesses that students who responded to the 2021 GUESSS survey are running or planning to run have been affected by COVID-19.

COVID-19 had a negative impact on businesses in sectors that require close contacts, or gathering together, with other people (such as restaurants, lodging, and personal services), whereas businesses grew in areas such as contactless services provided through online conferencing and apps. The 2021 GUESSS survey asked active and nascent entrepreneurs about the effect of the spread of COVID-19 on their business expansion.

According to the findings, on a global level, 22.1% of the nascent entrepreneurs responded "yes" when asked whether they were planning to grow their business owing to the spread of COVID-19, whereas in Japan, 49.6% of the nascent entrepreneurs responded "yes" to this question. Similarly, on a global level, 33.7% of the active entrepreneurs responded "yes" when asked whether their business grew owing to COVID-19, while 30.8% of active entrepreneurs in Japan responded "yes" to this question. Compared with respondents on the global level, it was found that more Japanese students were planning to take advantage of COVID-19 as a business opportunity, but the percentage of active entrepreneurs who were actually experiencing business growth was almost the same as the global average.

6. Conclusion

The results of the 2021 GUESSS survey showed that Japan was at one of the lowest levels in a global comparison in terms of students' post-graduation entrepreneurial intentions, those who were actually in the process of establishing a business and those who had already established a business. This situation has been the same since the time Japan first participated in the GUESSS survey in 2011. Even after 10 years, Japanese students' entrepreneurial intentions have not increased significantly. Nevertheless, the 2021 survey shows that the proportion of those who took courses in entrepreneurship was higher than in the past. This may be because the universities participating in the survey have established programs and curricula related to entrepreneurship or because students with stronger entrepreneurial intentions or who have established a business might be taking courses on entrepreneurship and, simultaneously, have exhibited interest in responding to the GUESSS survey. Therefore, while we cannot quickly conclude that Japanese students' interest in entrepreneurship has increased, we would like to look forward to this trend to continue.

Although entrepreneurial intentions and activities remain low overall in Japan, the increase in entrepreneurial intentions among students majoring in the engineering and medical fields is noteworthy. Since the number of samples of the respondents was small, it is likely that the students who responded to the survey were those who were interested in entrepreneurship or who had already started businesses. However, if more students with these majors will have entrepreneurial intentions, it could lead to the creation of more high-tech start-ups.

The GUESSS 2021 survey in Japan ended up with fewer respondents than the previous survey as many universities were holding their classes online owing to the COVID-19 pandemic. In the next survey, we have to think of ways to spread the word about participating in the survey to

ask more students to participate. Finally, we would like to express our appreciation to all the university personnel who helped with the GUESSS 2021 survey and to those students who participated in it.

【References】

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theoryof 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., and C. Zanger (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 GUESSS 2013/2014,* University of St.Gallen.

Sieger, P., Fueglistaller, U., & Zellweger, T. (2016) *Student Entrepreneurship 2016: Insights From 50 Countries. International Report of the GUESSS Project 2016*, St.Gallen/Bern: KMU-HSG/IMU.

Souitaris, V., Zerbinati, 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. & M. Schaper (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.