



## 2023 GUESSS

Global  
University  
Entrepreneurial  
Spirit Students'  
Survey

# 2023 Global University Entrepreneurial Spirit Students' Survey



## **2023 GUESSS**

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Spirit Students' Survey

| Chapter 1 |

# **Introduction**





# **| Chapter 1 | Introduction**

## **1. Background**

GUESSS, which stands for the ‘Global University Entrepreneurial Spirit Students’ survey, is an international research project that investigates the entrepreneurial intentions and activities of university students. This project is conducted biennially and aims to understand the current state of entrepreneurship among domestic and international university (including graduate) students and to perform international comparative studies. In 2023, the Global University Entrepreneurial Spirit Survey included participation from 58 countries, with the objective of understanding the state of entrepreneurship among university students on a national scale within the country.

This report is based on data collected domestically and aims to systematically and longitudinally observe the entrepreneurial intentions and activities of university (including graduate) students nationwide. Additionally, the report seeks to identify factors that influence students inclined towards new ventures and entrepreneurial careers, as well as to observe and evaluate university support activities for entrepreneurial endeavors. By utilizing data on the current state of entrepreneurship among university (including graduate) students, this report aims to contribute to the formulation of entrepreneurship education policies.

## **2. Project Planning and Data Collecting Process**

GUESSS is coordinated by the University of St. Gallen and the University of Bern in Switzerland, using an online survey method. In the domestic context, the Korea Entrepreneurship Foundation (KoEF) served as the research institution conducting the survey, receiving participation applications from universities nationwide. Online surveys were conducted based on the URLs provided by each university. The survey was offered in two languages (Korean and English) to allow participating students to choose their preferred language.

A total of 27 universities nationwide participated in this survey, with 1,409 university (including

graduate) students responding to the survey. The collected data was then utilized to analyze the state of entrepreneurship among domestic university (including graduate) students.

<Table 1-1> Overview of 2023 GUESSS

Category	Content
Survey Target	University students nationwide
Survey Frequency	Biennial (every 2 years)
Survey Period	September 4, 2023 - December 22, 2023
Survey Method	Online survey
Valid Samples	Total of 1,409 samples
Data Collection Tool	Structured Questionnaire

### 3. Characteristics of the Survey Sample

In the GUESSS project, the survey was conducted with items that all participants responded to, as well as specific items tailored to entrepreneurs, prospective entrepreneurs, and students with entrepreneurial parents, depending on the type. Out of the total 1,409 respondents, there were 46 entrepreneurs (4.4%), 332 prospective entrepreneurs (31.6%), and 269 students with entrepreneurial parents (25.6%). This report is structured by distinguishing the responses according to these types.

<Table 1-2> Survey Sample

Category	Frequency	Percentage (%)
Entrepreneurs	46	4.4
Prospective entrepreneurs	332	31.6
Students with entrepreneurial parents	269	25.6
Total sample	1,409	100.0

The survey involved 27 universities nationwide (excluding others), with a total of 1,409 respondents. The analysis was performed based on this sample.

<Table 1-3> Participating Universities

Regions	Universities	Regions	Universities
Capital Region	Korea University	Chungcheong Region	Daejeon University
	Dongguk University		Paichai University
	Soongsil University		Semyung University
	Anyang University		Soonchunhyang University
	Incheon National University		U1 University
	Inha Technical College		Cheongju University
	Chung-Ang University		Chungnam National University
	Korea Polytechnic University		Korea Advanced Institute of Science and Technology (KAIST)
Daegu-Gyeongbuk and Gangwon Region	Keimyung University	Southeast Region	University of Science and Technology (UST)
	Daegu University		Pukyong National University
	Daegu Haany University	Honam and Jeju Region	Busan University of Foreign Studies
	Yonsei University Mirae Campus		Chonnam National University
	Yeungnam University	Others	
	Pohang University of Science and Technology		
	Korea Maritime and Ocean University		



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| Chapter 2 |

# Analysis of Common Items



## | Chapter 2 | Analysis of Common Items

### 1. Demographic Characteristics

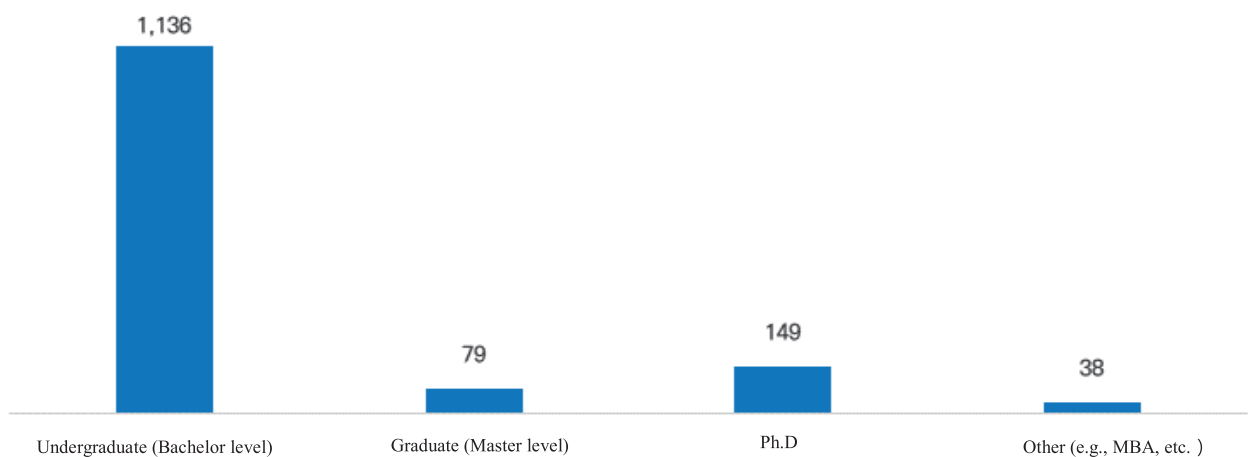
#### (1) Respondents' Education Level

The sample consisted of 80.6% undergraduate students (1,136 individuals), making it the highest group, followed by doctoral students at 10.6% (149 individuals), master's students at 5.6% (79 individuals), and others at 2.7% (38 individuals).

<Table 2-4> Respondents' Education Level

Category	Frequency	Percentage (%)
Undergraduate (Bachelor level)	1,136	80.6
Graduate (Master level)	79	5.6
Ph.D	149	10.6
Other (e.g., MBA, etc.)	38	2.7
No response	7	0.5
Total	1,409	100.0

<Figure 2-5> Respondents' Education Level



#### (2) Respondents' Major (main field of study)

The most common major among the respondents was engineering (including architecture) at

22.6% (318 individuals). This was followed by business administration at 15.8% (222 individuals), medical/life sciences at 15.4% (217 individuals), natural sciences at 12.3% (173 individuals), computer/IT at 11.6% (164 individuals), arts and sciences at 5.9% (83 individuals), social sciences at 5.4% (76 individuals), arts/humanities at 5.2% (73 individuals), others at 3.4% (48 individuals), economics at 1.3% (19 individuals), law at 0.9% (12 individuals), and mathematics at 0.1% (2 individuals).

<Table 2-6> Respondents' Major

Category	Frequency	Percentage (%)
Arts/Humanities (Culture, History, Linguistics, Philosophy, Religion, etc.)	73	5.2
Business Administration	222	15.8
Computer/IT	164	11.6
Economics	19	1.3
Engineering (including Architecture)	318	22.6
Medical/Life Sciences	217	15.4
Law	12	0.9
Mathematics	2	0.1
Natural Sciences	173	12.3
Arts and Sciences (Fine Arts, Design, Dramatics, Music, etc.)	83	5.9
Social Sciences (Psychology, Political Science, Education, etc.)	76	5.4
Others	48	3.4
No response	2	0.1
Total	1,409	100.0

### (3) Respondents' Gender and Birth Year

The sample consisted of 50.8% female (716 individuals), 48.3% male (681 individuals), with 0.6% (9 individuals) identifying as other, and 0.2% (3 individuals) not responding. Regarding birth year, 44.4% (625 individuals) were born after 2001, 29.2% (412 individuals) were born between 1996 and 2000, 7.4% (104 individuals) were born between 1991 and 1995, and 3.0% (43 individuals) were



born before 1990.

<Table 2-7> Respondents' Demographic Characteristics

Category		Frequency	Percentage (%)
Gender	Male	681	48.3
	Female	716	50.8
	Others	9	0.6
	No response	3	0.2
Birth Year	Before 1980	7	0.5
	Between 1981 and 1985	9	0.6
	Between 1986 and 1990	27	1.9
	Between 1991 and 1995	104	7.4
	Between 1996 and 2000	412	29.2
	After 2001	625	44.4
	No response	225	16.0
Total		1,409	100.0

## 2. Career Choice Intentions

### (1) Post-Graduation Career Preferences

The career preferences of university (including graduate) students after graduation were: ① an employee in large business (30.9%), ② an employee in medium-sized business (19.9%), ③ an employee in public service (11.3%), ④ an employee in research institutions (9.4%), ⑤ a founder working in one's own business (6.9%), ⑥ an employee in small business (4.2%), ⑦ an employee in non-profit organizations (0.6%), ⑧ a successor in one's parents'/family's business (0.6%), and ⑨ a successor in another business (0.3%). The majority of students expected to seek employment after graduation, with entrepreneurship (starting a business) being relatively low at 6.9%. Compared to the 2021 survey results, the rate of entrepreneurship decreased slightly from 7.2% in 2021 to 6.9% in 2023. Compared to the global survey results, 15.7% of respondents from all countries considered entrepreneurship as a post-graduation career path, which is significantly higher than the domestic level.

<Table 2-8> Post-Graduation Career Preferences

Category	2021		2023		Global Survey (2023)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
An employee in small business (1-49 employees)	59	4.8	59	4.2	14,727	6.5
An employee in medium-sized business (50-249 employees)	190	15.6	280	19.9	26,951	11.9
An employee in large business (250+ employees)	271	22.2	436	30.9	50,904	22.5
An employee in non-profit organizations	7	0.6	9	0.6	4,137	1.8
An employee in research institutions (for academic career development)	60	4.9	132	9.4	22,014	9.7
An employee in public service	256	21.0	159	11.3	30,594	13.5
Founder working in my own business	88	7.2	97	6.9	35,517	15.7
A successor in my parents'/family's business	6	0.5	8	0.6	3,800	1.7

A successor in another business	3	0.2	4	0.3	1,781	0.8
Other/Do not know yet	280	23.0	225	16.0	36,293	16.0
Total	1,220	100.0	1,409	100.0	226,718	100.0

Five years after graduation, the career preferences of university (including graduate) students were: ① an employee in large business (36.6%), ② an employee in public service (14.0%), ③ a founder working in one's own business (12.9%), ④ an employee in medium-sized business (12.8%), ⑤ an employee in research institutions (6.1%), ⑥ an employee in small business (1.9%), ⑦ an employee in non-profit organizations (1.1%), ⑧ a successor in one's parents'/family's business (0.9%), and ⑨ a successor in another business (0.1%). Compared to the 2021 survey results, the rate of entrepreneurship increased slightly from 11.7% in 2021 to 12.9% in 2023. Compared to the global survey results, 30.0% of respondents from all countries considered entrepreneurship as a career path five years after graduation, which is significantly higher than the domestic level.

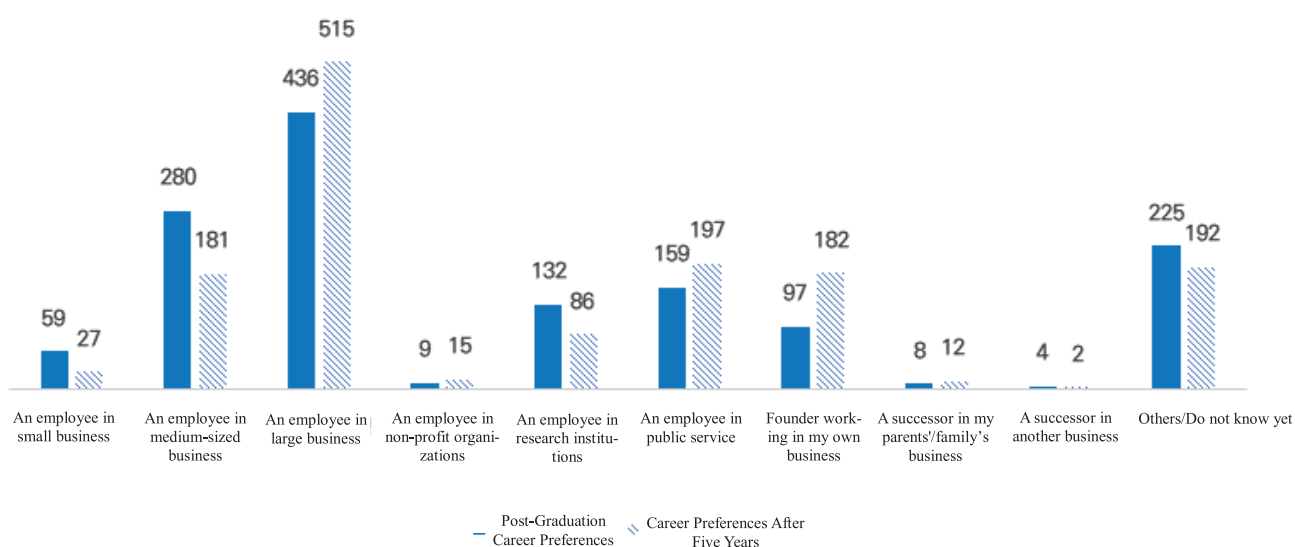
<Table 2-9> Career Preferences After Five Years

Category	2021		2023		Global Survey (2023)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
An employee in small business (1-49 employees)	30	2.5	27	1.9	7,793	3.4
An employee in medium-sized business (50-249 employees)	132	10.8	181	12.8	15,421	6.8
An employee in large business (250+ employees)	304	24.9	515	36.6	42,153	18.6
An employee in non-profit organizations	10	0.8	15	1.1	3,858	1.7
An employee in research institutions (for academic career development)	60	4.9	86	6.1	20,421	9.0
An employee in public service	290	23.8	197	14.0	31,166	13.7
Founder working in my own business	143	11.7	182	12.9	68,095	30.0
A successor in my parents'/family's business	10	0.8	12	0.9	3,890	1.7
A successor in another business	7	0.6	2	0.1	3,319	1.5

Other/Do not know yet	234	19.2	192	13.6	30,602	13.5
Total	1,220	100.0	1,409	100.0	226,718	100.0

Comparing the preferences, the inclination towards entrepreneurship approximately doubles from post-graduation to five years post-graduation.

<Figure 2-10> Post-Graduation Career Preferences and Career Preferences After Five Years



## (2) Intention to Start New Business

Among the respondents, the proportion of university (including graduate) students currently running a business was 3.3%, which is a decrease from 4.3% in 2021. Compared to the global survey results, 11.1% of respondents worldwide were currently running a business, indicating a significantly higher level of entrepreneurship compared to the domestic sample.

<Table 2-11> Current Entrepreneurship Status

Category	2021		2023		Global Survey (2023)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	53	4.3	46	3.3	25,205	11.1
No	1,167	95.7	1363	96.7	201,513	88.9

Total	1,220	100.0	1,409	100.0	226,718	100.0
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The intention to start a business in the future was indicated by 26.4% of the respondents, an increase from 25.4% in 2021. This is much higher than the immediate post-graduation career intention (6.9%) and the career intention five years post-graduation (12.9%). Compared to the global survey results, 25.7% of respondents expressed intention to start a business in the future, showing a similar level to the domestic respondents.

<Table 2-12> Intention to Start a Business in the Future

Category	2021		2023		Global Survey (2023)	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	310	25.4	372	26.4	58,314	25.7
No	910	74.6	1037	73.6	168,404	74.3
Total	1,220	100.0	1,409	100.0	226,718	100.0

### 3. Determinants of Entrepreneurial Intentions

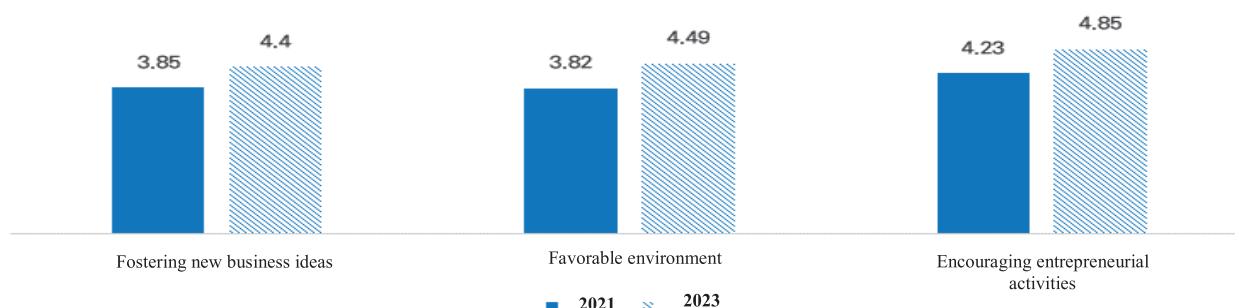
#### (1) University Environment / Education and Training

The survey assessed the university environment, education, and training that support entrepreneurship, measured on a 7-point Likert scale. 'The atmosphere at my university inspires me to develop ideas for new businesses' scored 4.40. 'There is a favorable climate for becoming an entrepreneur at my university' scored 4.49. 'My university encourages students to engage in entrepreneurial activities' scored 4.85. 'At my university, students can get entrepreneurship-related advice and guidance easily' scored 4.76. Compared to the 2021 survey results, all these scores have increased. This indicates that universities are creating an environment that promotes student entrepreneurship and that support activities at the university level have improved. Compared to the global survey results, the global average score was 4.49, while the domestic score was slightly lower at 4.63.

<Table 2-13> University Environment / Education and Training

Category	2021		2023			Global Survey (2023)		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
The atmosphere at my university inspires me to develop ideas for new businesses.	1,215	3.85	1,407	4.40	1.63	225,943	4.44	1.81
There is a favorable climate for becoming an entrepreneur at my university.	1,215	3.82	1,400	4.49	1.56	224,458	4.43	1.79
My university encourages students to engage in entrepreneurial activities.	1,215	4.23	1,401	4.85	1.54	224,329	4.57	1.79
At my university, students can get entrepreneurship-related advice and guidance easily.	-	-	1,397	4.76	1.52	223,907	4.50	1.87
Average	3.97		4.63			4.49		

<Figure 2-14> Comparison of University Environment / Education and Training



## (2) Entrepreneurship Education

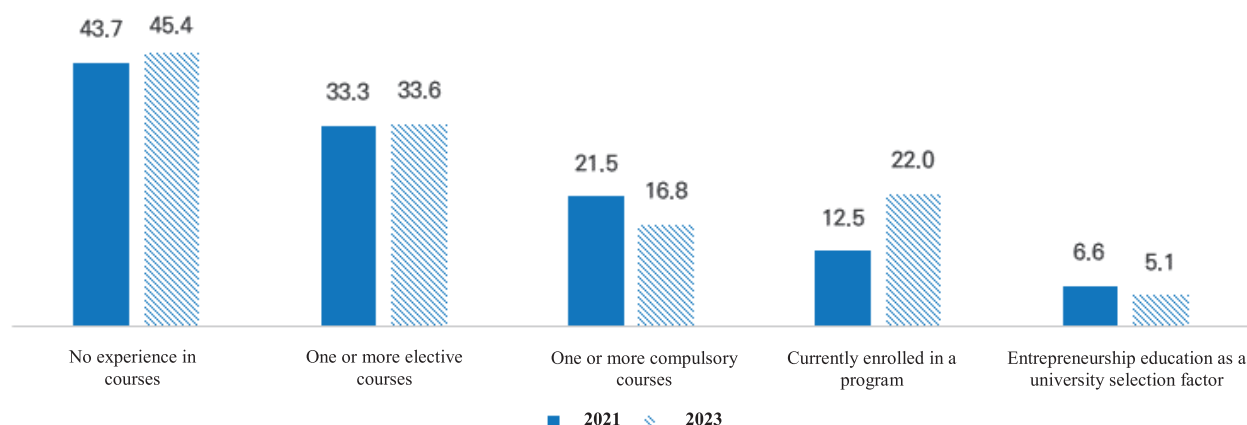
Analysis of the enrollment in entrepreneurship education at universities showed the following results: 'I have not attended a course on entrepreneurship so far': 45.4% of respondents indicated this, an increase from 43.7% in 2021. 'I have attended at least one entrepreneurship course as elective': 33.6% of respondents indicated this, slightly down from 33.3% in 2021. 'I have attended at least one entrepreneurship course as compulsory part of my studies': 16.8% of respondents indicated this, a decrease from 21.5% in 2021. 'I am studying in a specific program on entrepreneurship': 22.0% of respondents indicated this, an increase from 12.5% in 2021. A decrease from 21.5% in 2021. 'I chose to study at this university mainly because of its strong entrepreneurial reputation': 5.1% of respondents indicated this, a decrease from 6.6% in 2021. Compared to the global survey results, the enrollment in entrepreneurship courses and programs is higher domestically, but the compulsory enrollment in entrepreneurship courses and the choice of university for its strength in entrepreneurship education are higher on the global average.

<Table 2-15> Entrepreneurship Education

Category	2021		2023		Global Survey (2023)	
	Number of Responses	Proportion	Number of Responses	Proportion	Number of Responses	Proportion
I have not attended a course on entrepreneurship so far.	533	43.7	639	45.4	133,206	58.8
I have attended at least one entrepreneurship course as elective.	406	33.3	473	33.6	51,370	22.7
I have attended at least one entrepreneurship course as compulsory part of my studies	262	21.5	237	16.8	39,155	17.3

I am studying in a specific program on entrepreneurship.	153	12.5	310	22.0	14,220	6.3
I chose to study at this university mainly because of its strong entrepreneurial reputation.	80	6.6	72	5.1	20,836	9.2

<Figure 2-16> Comparison of Entrepreneurship Education



### (3) Program Learning / External Support Organizations

Analysis of the program learning showed the following results: 'It increased my understanding of the attitudes, values, and motivations of entrepreneurs' scored 4.72. 'It increased my understanding of the actions someone has to take to start a business' scored 4.76. 'It enhanced my practical management skills to start a business' scored 4.64. 'It enhanced my ability to develop networks' scored 4.54. Compared to the 2021 survey results, all these scores have increased. This indicates that entrepreneurship-related competencies have been strengthened through program learning. Compared to the global survey results, the global average was 4.20, while the domestic average was significantly higher at 4.67.

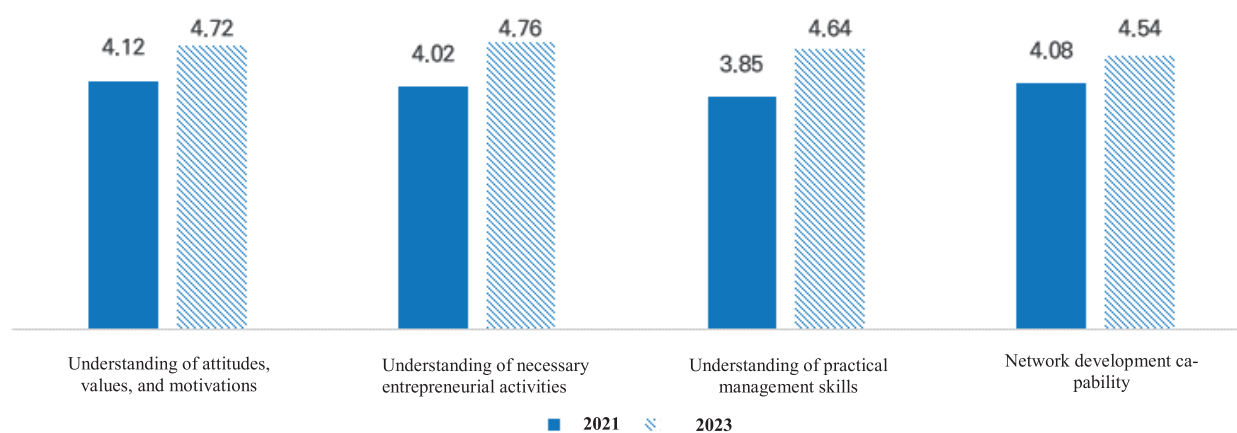
Analysis of the external support organizations showed the following results: 'It encouraged me to identify business opportunities closely aligned with my own knowledge and interests' scored 4.63. 'It encouraged me to identify business opportunities closely aligned with current trends, shocks, breakthroughs, or other changes in the business environment' scored 4.68. Compared to the global survey results, the global average was 4.19, while the domestic average was significantly higher at 4.66.



<Table 2-17> Program Learning / External Support Organizations

Category		2021		2023			Global Survey (2023)		
		Number of Responses	Average	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
Program Learning	It increased my understanding of the attitudes, values, and motivations of entrepreneurs.	1,217	4.12	1,368	4.72	1.56	221,912	4.29	1.92
	It increased my understanding of the actions someone has to take to start a business.	1,209	4.02	1,360	4.76	1.59	219,892	4.15	1.96
	It enhanced my practical management skills to start a business.	1,208	3.85	1,363	4.64	1.58	219,611	4.05	1.95
	It enhanced my ability to develop networks.	1,207	4.08	1,361	4.54	1.57	219,311	4.29	1.89
	Average		4.02			4.67			4.20
External Support Organizations	It encouraged me to identify business opportunities closely aligned with my own knowledge and interests.	-	-	1,361	4.63	1.58	219,200	4.22	1.92
	It encouraged me to identify business opportunities closely aligned with current trends, shocks, breakthroughs, or other changes in the business environment.	-	-	1,360	4.68	1.56	218,967	4.16	1.94
	Average		-			4.66			4.19

<Figure 2-18> Comparison of Program Learning



## 4. Personal Characteristics

### (1) Subjective Well-Being / Life Satisfaction

Analysis of the subjective well-being and life satisfaction showed the following results: 'In most ways my life is close to my ideal' scored 4.87. 'The conditions of my life are excellent' scored 4.87. 'I am satisfied with my life' scored 4.90. 'So far, I have gotten the important things I want in life' scored 4.70. 'If I could live my life over, I would change almost nothing' scored 4.52. Compared to the 2021 survey results, all these scores have increased. Compared to the global survey results, the global average score was 4.73, while the domestic score was in a similar level at 4.74.

<Table 2-19> Subjective Well-Being / Life Satisfaction

Category	2021		2023			Global Survey (2023)		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
In most ways my life is close to my ideal.	1,214	4.00	1,405	4.72	1.45	225,500	4.64	1.55
The conditions of my life are excellent.	1,210	4.29	1,401	4.87	1.42	224,245	4.81	1.56
I am satisfied with my life.	1,206	4.62	1,399	4.90	1.52	224,185	5.02	1.61
So far, I have gotten the important things I want in life.	1,205	4.18	1,402	4.70	1.43	224,216	4.70	1.68
If I could live my life over, I would change almost nothing.	1,207	3.35	1,401	4.52	1.71	223,916	4.49	1.93
Average		4.09			4.74			4.73

### (2) Resilience

Analysis of the resilience showed the following results: 'I believe I can grow in positive ways by dealing with difficult situations' scored 5.23. 'I actively look for ways to replace the losses I encounter in life' scored 5.10. 'Regardless of what happens to me, I believe I can control my reaction to it' scored 4.99. 'I look for creative ways to alter difficult situations' scored 4.97. Compared to the global survey

results, the global average score was 5.34, while the domestic score was slightly lower at 5.07.

<Table 2-20> Resilience (New Item)

Category	2023			Global Survey (2023)		
	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
I believe I can grow in positive ways by dealing with difficult situations.	1,404	5.23	1.37	224,938	5.69	1.33
I actively look for ways to replace the losses I encounter in life.	1,401	5.10	1.36	223,942	5.17	1.46
Regardless of what happens to me, I believe I can control my reaction to it.	1,401	4.99	1.37	223,858	5.19	1.46
I look for creative ways to alter difficult situations.	1,398	4.97	1.42	223,441	5.32	1.44
Average		5.07			5.34	

### (3) Political Ideology

Analysis of political ideology showed the following results: 'There is no need for tougher regulations on business to protect the environment' scored 3.11. 'Companies should not be required to give minorities preference in hiring in order to reduce discrimination against them' scored 4.22. 'Regulations to protect the environment are too much of a burden on business' scored 3.71. 'Addressing social problems causing crime is not the best way to thwart crime' scored 3.99. 'The best way to reduce crime is to make sure that criminals are caught, convicted, and punished' scored 5.00. Compared to the global survey results, the global average was 3.47, while the domestic average was significantly higher at 4.01.

<Table 2-21> Political Ideology (New Item)

Category	2023			Global Survey (2023)		
	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
There is no need for tougher regulations on business to protect the environment.	1,402	3.11	1.75	221,436	3.05	1.93
Companies should not be required to give minorities preference in hiring in order to reduce discrimination against them.	1,403	4.22	1.71	220,446	3.79	2.00
Regulations to protect the environment are too much of a burden on	1,401	3.71	1.58	220,173	3.12	1.83

business.						
Addressing social problems causing crime (e.g., poverty and joblessness) is not the best way to thwart crime.	1,400	3.99	1.66	219,982	3.19	1.95
The best way to reduce crime is to make sure that criminals are caught, convicted, and punished.	1,393	5.00	1.64	219,492	4.21	2.00
Average	4.01			3.47		

#### (4) Social Conservatism

Analysis of social conservatism showed the following results: 'Government should redistribute income from the better off to the less well off' scored 4.02. 'Ordinary people do not receive a fair share of the nation's wealth': 4.26. 'Government should spend a great deal on improving the life of people' scored 5.14. 'Big business owners benefit at the expense of workers' scored 4.28. 'There is one law for the rich and one law for the poor' scored 4.84. 'Management will always try to take advantage of employees if it gets the chance' scored 4.55. Compared to the global survey results, the global average score was 4.67, while the domestic score was slightly lower at 4.52.

<Table 2-22> Social Conservatism (New Item)

Category	2023			Global Survey (2023)		
	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
Government should redistribute income from the better off to the less well off.	1,401	4.02	1.63	220,729	4.05	1.91
Ordinary working people do not get their fair share of the nation's wealth.	1,397	4.26	1.52	219,853	4.90	1.63
Government should spend a great deal on improving the life of people.	1,398	5.14	1.37	219,792	5.28	1.56
Big business owners benefit at the expense of workers.	1,400	4.28	1.49	219,606	4.89	1.73
There is one law for the rich and one law for the poor.	1,399	4.84	1.54	219,240	4.40	2.01
Management will always try to take advantage of employees if it gets the chance.	1,396	4.55	1.44	218,850	4.50	1.81
Average	4.52			4.67		

## 5. Entrepreneurial Characteristics

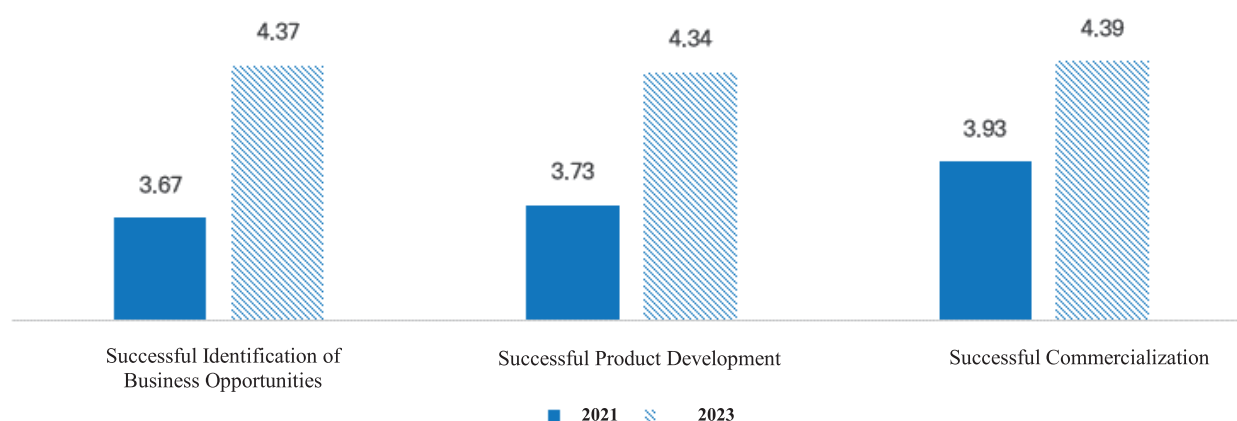
### (1) Entrepreneurial Self-Efficacy

Analysis of entrepreneurial self-efficacy showed the following results: 'I can successfully discover new business opportunities' scored 4.37. 'I can successfully create new products' scored 4.34. 'I can think creatively' scored 4.67. 'I can successfully commercialize ideas' scored 4.39. Compared to the global survey results, the global average was 4.85, while the domestic average was significantly lower at 4.44.

<Table 2-23> Entrepreneurial Self-Efficacy

Category	2021		2023			Global Survey (2023)		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
I can successfully discover new business opportunities.	893	3.67	1,404	4.37	1.56	225,371	4.74	1.69
I can successfully create new products.	887	3.73	1,404	4.34	1.59	224,148	4.49	1.76
I can think creatively.	-	-	1,403	4.67	1.56	224,224	5.43	1.50
I can successfully commercialize ideas.	883	3.93	1,402	4.39	1.59	223,777	4.75	1.71
Average	3.78		4.44			4.85		

<Figure 2-24> Comparison of Entrepreneurial Self-Efficacy



### (2) Entrepreneurial Intent

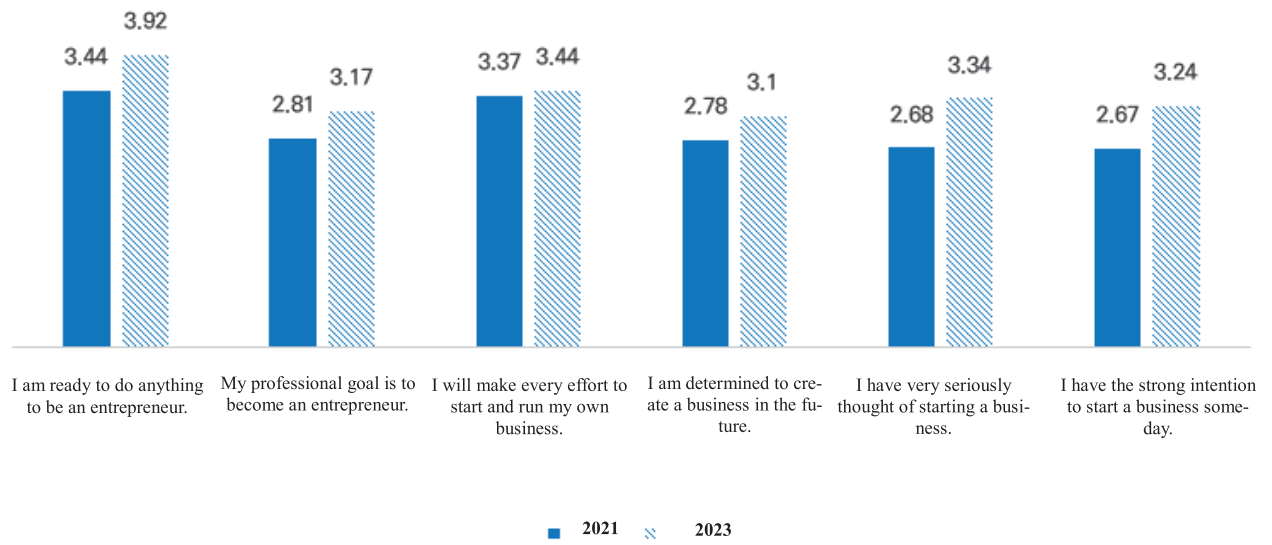
Analysis of entrepreneurial intent was conducted on 1,031 respondents, excluding prospective

entrepreneurs and current entrepreneurs. Analysis of the entrepreneurial intent showed the following results: 'I am ready to do anything to be an entrepreneur' scored 3.92. 'My professional goal is to become an entrepreneur' scored 3.17. 'I will make every effort to start and run my own business' scored 3.44. 'I am determined to create a business in the future' scored 3.10. 'I have very seriously thought of starting a business' scored 3.34. 'I have the strong intention to start a business someday' scored 3.24. Compared to the global survey results, the global average score was 3.72, while the domestic score was slightly lower at 3.37. Compared to the global survey results, the global average score was 3.72, while the domestic score was slightly lower at 3.37.

<Table 2-25> Entrepreneurial Intent

Category	2021		2023			Global Survey (2023)		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation	Number of Responses	Average	Standard Deviation
I am ready to do anything to be an entrepreneur.	892	3.44	1,018	3.92	1.62	161,606	3.66	1.84
My professional goal is to become an entrepreneur.	883	2.81	1,018	3.17	1.64	161,038	3.63	1.99
I will make every effort to start and run my own business.	884	3.37	1,015	3.44	1.70	160,854	3.74	2.02
I am determined to create a business in the future.	886	2.78	1,017	3.10	1.72	160,781	3.73	2.06
I have very seriously thought of starting a business.	885	2.68	1,016	3.34	1.80	160,715	3.74	2.07
I have the strong intention to start a business someday.	882	2.67	1,014	3.24	1.79	160,414	3.82	2.12
Average	2.96		3.37			3.72		

<Figure 2-26> Comparison of Entrepreneurial Intent



## 6. Comparative Analysis of Characteristics between Entrepreneurs and Prospective Entrepreneurs

To compare and analyze the characteristics of entrepreneurs and prospective entrepreneurs, an analysis was conducted focusing on post-graduation full-time (main occupation) plans, previous entrepreneurial experience, ownership share (including prospective entrepreneurs), and entrepreneurial self-efficacy. A sample of 46 entrepreneurs and a sample of 332 prospective entrepreneurs were used in the analysis.

### (1) Post-Graduation Full-Time Plans

Regarding post-graduation full-time plans, 41.6% of prospective entrepreneurs responded that they plan to engage in entrepreneurial activities as the main occupation. This is higher than the 37.0% of entrepreneurs who plan to do the same, indicating a greater inclination among prospective entrepreneurs towards full-time entrepreneurship.

<Table 2-27> Post-Graduation Full-Time Plans

Category	Entrepreneurs		Prospective entrepreneurs	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	17	37.0	138	41.6
No	11	23.9	25	7.5
Do not know yet	17	37.0	157	47.3
No response	1	2.2	12	3.6
Total	46	100.0	332	100.0

### (2) Previous Entrepreneurial Experience

The proportion of entrepreneurs with previous entrepreneurial experience was significantly higher at 28.3%, compared to only 4.5% among prospective entrepreneurs.

<Table 2-28> Previous Entrepreneurial Experience



Category	Entrepreneurs		Prospective entrepreneurs	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	13	28.3	15	4.5
No	32	69.6	311	93.7
No response	1	2.2	6	1.8
Total	46	100.0	332	100.0

### (3) Ownership Share (including prospective entrepreneurs)

In terms of ownership share, 54.3% of entrepreneurs and 49.7% of prospective entrepreneurs indicated they plan to hold more than 51% of the ownership share. However, the proportion of respondents planning to hold less than 49% of the ownership share was higher among entrepreneurs (32.6%) compared to prospective entrepreneurs (15.7%).

<Table 2-29> Ownership Share

Category	Entrepreneurs		Prospective entrepreneurs	
	Frequency	Percentage (%)	Frequency	Percentage (%)
0-49%	15	32.6	52	15.7
50%	3	6.5	93	28.0
51-100%	25	54.3	165	49.7
No response	3	6.5	22	6.6
Total	46	100.0	332	100.0

### (4) Locally Residing Entrepreneurship (including prospective entrepreneurs)

Regarding plans to start a business in the same city or town as their current school, 41.3% of entrepreneurs had already started their ventures locally, while 25.3% of prospective entrepreneurs planned to do so. This indicates a higher current proportion of locally residing entrepreneurs compared to prospective entrepreneurs.

<Table 2-30> Locally Residing Entrepreneurship

Category	Entrepreneurs		Prospective entrepreneurs	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	19	41.3	84	25.3
No	26	56.5	239	72.0
No response	1	2.2	9	2.7
Total	46	100.0	332	100.0

### (5) Entrepreneurial Self-Efficacy

Comparative analysis of entrepreneurial self-efficacy showed that both entrepreneurs and prospective entrepreneurs had higher average scores compared to the overall average. Specifically, entrepreneurs scored a very high sense of entrepreneurial self-efficacy, with an average of 5.87 points, which was higher than that of prospective entrepreneurs (5.26 points).

<Table 2-31> Entrepreneurial Self-Efficacy

Category	Entrepreneur average	Prospective entrepreneurs average	Overall average
I can successfully discover new business opportunities.	5.61	5.24	4.37
I can successfully create new products.	5.93	5.18	4.34
I can think creatively.	6.07	5.43	4.67
I can successfully commercialize ideas.	5.87	5.18	4.39
Average	5.87	5.26	4.44

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| Chapter 3 |

# Analysis of Entrepreneurs



## | Chapter 3 | Analysis of Entrepreneurs

### 1. Demographic Characteristics

The sample consisted of 46 entrepreneurs. Of these, 60.9% (28 individuals) were male. In terms of educational background, the majority had completed a bachelor's degree, accounting for 78.3% (36 individuals). The most common major was business, accounting for 30.4% (14 individuals).

<Table 3-1> Respondents' Demographic Characteristics

Category		Frequency	Percentage (%)
Gender	Male	28	60.9
	Female	18	39.1
	Others	-	-
	No response	-	-
Education	Undergraduate (Bachelor level)	36	78.3
	Graduate (Master level)	2	4.3
	Ph.D	8	17.4
	Other (e.g., MBA, etc.)	-	-
	No response	-	-
Major	Arts/Humanities (Culture, History, Linguistics, Philosophy, Religion, etc.)	4	8.7
	Business Administration	14	30.4
	Computer/IT	3	6.5
	Economics	1	2.2
	Engineering (including Architecture)	8	17.4
	Medical/Life Sciences	6	13.0
	Law	-	-
	Mathematics	-	-
	Natural Sciences	4	8.7
	Arts and Sciences (Fine Arts, Design, Dramatics, Music, etc.)	1	2.2

	Social Sciences (Psychology, Political Science, Education, etc.)	4	8.7
	Others	1	2.2
	No response	-	-
	Total	46	100.0

## 2. Entrepreneur Characteristics

### (1) Post-Graduation Full-Time Plans

Regarding whether they plan to run their current business full-time after graduation, 37.0% (17 individuals) responded 'yes,' and 23.9% (11 individuals) responded 'no.' Also, 37.0% (17 individuals) responded 'Do not know yet,' indicating a significantly high level.

<Table 3-2> Post-Graduation Full-Time Plans

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	35	66.0	17	37.0
No	7	13.2	11	23.9
Do not know yet	6	11.3	17	37.0
No response	5	9.4	1	2.2
Total	53	100	46	100.0

### (2) Previous Entrepreneurial Experience

When asked if they had any previous entrepreneurial experience before their current venture, 28.3% (13 individuals) responded 'yes,' while 69.6% (32 individuals) responded 'no.' Compared to the 2021 survey results, previous entrepreneurial experience has decreased.

<Table 3-3> Previous Entrepreneurial Experience

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	23	43.4	13	28.3
No	27	50.9	32	69.6
No response	3	5.7	1	2.2
Total	53	100.0	46	100.0

### 3. Characteristics and Performance of Business

#### (1) Locally Residing Entrepreneurship

Regarding whether their businesses is located in the same city as their current school, 41.3% (19 individuals) responded 'yes,' while 56.5% (26 individuals) responded 'no.'

<Table 3-4> Locally Residing Entrepreneurship (New Item)

Category	2023	
	Frequency	Percentage (%)
Yes	19	41.3
No	26	56.5
No response	1	2.2
Total	46	100.0

#### (2) Industrial Sector of the Business

The industrial sector of the businesses was as follows: Primary sector: 4.3% (2 individuals), Secondary sector: 15.2% (7 individuals), Tertiary sector: 28.3% (13 individuals), Quaternary sector: 32.6% (15 individuals), Other/Uncertain: 17.4% (8 individuals).

<Table 3-5> Industrial Sector of the Business (New Item)

Category	2023	
	Frequency	Percentage (%)
Primary sector	2	4.3
Secondary sector	7	15.2
Tertiary sector	13	28.3
Quaternary sector	15	32.6
Other/Uncertain	8	17.4
No response	1	2.2
Total	46	100.0



### (3) Ownership Share

Ownership share in their business were as follows: Less than 49%: 32.6% (15 individuals). 50%: 6.5% (3 individuals). 51% or more: 54.3% (25 individuals). The proportion of entrepreneurs holding ownership share of 51% or more has significantly decreased from 82.0% in 2021 to 54.3% in 2023.

<Table 3-6> Ownership Share

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
0-49%	7	14.0	15	32.6
50%	2	4.0	3	6.5
51-100%	41	82.0	25	54.3
No response	3	5.7	3	6.5
Total	53	100.0	46	100.0

### (3) VC Support

Regarding venture capital funding, 13.0% (6 individuals) reported receiving investments, while 78.3% (36 individuals) had not received any venture capital support.

<Table 3-7> VC Support (New Item)

Category	2023	
	Frequency	Percentage (%)
Yes	6	13.0
No	36	78.3
No response	4	8.7
Total	46	100.0

### (4) Business Performance

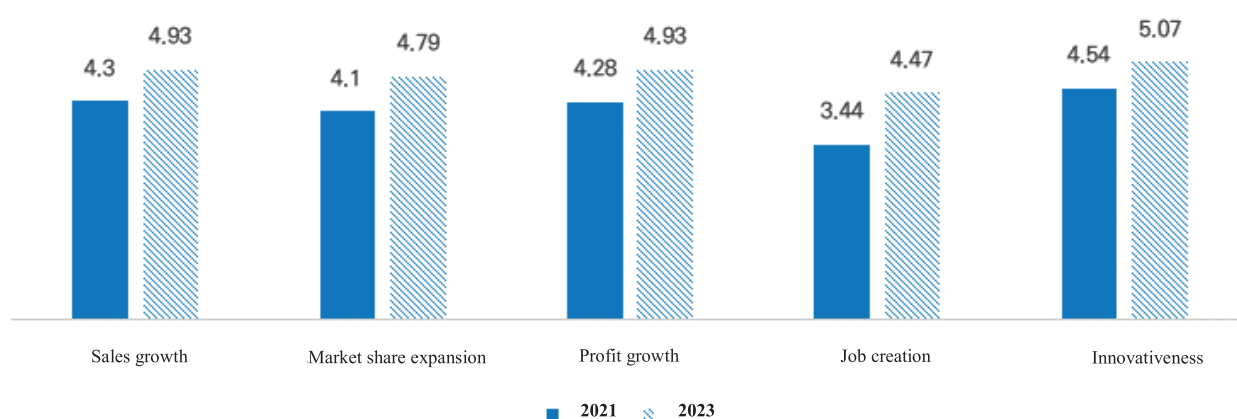
Analysis of business performance relative to competitors showed the following results: 'Sales

growth' scored 2.93. 'Market share expansion' scored 4.79. 'Profit growth' scored 4.93. 'Job creation' scored 4.47. 'Innovativeness' scored 5.07. Compared to the 2021 survey results, all performance metrics have improved.

<Table 3-8> Business Performance Relative to Competitors

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
Sales growth	50	4.30	43	4.93	1.68
Market share expansion	50	4.10	43	4.79	1.80
Profit growth	50	4.28	43	4.93	1.70
Job creation	50	3.44	43	4.47	1.97
Innovativeness	50	4.54	43	5.07	1.73

<Figure 3-32> Comparison of Business Performance Relative to Competitors



## (5) Social and Environmental Performance

Analysis of social and environmental performance showed the following results: 'Contributes to campaigns and projects that promote the well-being of the society' scored 4.72. 'Emphasizes the importance of its social responsibilities to the society' scored 4.49. 'Participates in activities which aim to protect and improve the quality of the natural environment' scored 4.45. 'Targets sustainable growth which considers future generations' scored 5.19.

<Table 3-9> Social and Environmental Performance (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
Contributes to campaigns and projects that promote the well-being of the society.	43	4.72	1.93
Emphasizes the importance of its social responsibilities to the society.	43	4.49	2.08
Participates in activities which aim to protect and improve the quality of the natural environment.	42	4.45	2.08
Targets sustainable growth which considers future generations.	42	5.19	1.80

## 4. Business Ideas and Efforts

### (1) Business Ideas

Analysis of generating new business ideas showed the following results: 'I seek out multiple perspectives when coming up with a new business idea' scored 5.71. 'I rely on objective information on market needs when coming up with a new business idea' scored 5.86. 'I need to have a thorough understanding of the problems the customers face' scored 6.07. 'Before running with a business idea, I compare different alternatives and carefully select the most promising one' scored 5.95. 'I analyze the problems the customers face and propose solutions consistent with these problems' scored 5.93. 'When developing a business idea, I specify the core assumptions underlying that idea' scored 6.07. 'When forming a business idea, I need to find a good fit between the product features and market needs' scored 5.73. 'For my business idea to be strong, it must meet an important unsatisfied need in the market' scored 5.73. 'Great business ideas should not just please me but foremost please the customer' scored 6.02. 'I need to make the assumptions underlying my business idea explicit' scored 5.78. 'When developing a business idea, I need to stay rational and to control emotions' scored 5.82. 'When forming my business idea, it is useful for me to write a business plan or compose a business model canvas' scored 5.91. 'When forming my business idea, it is useful for me to specify a value proposition' scored 5.98.

<Table 3-10> Business Ideas (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
I seek out multiple perspectives when coming up with a new business idea.	45	5.71	1.49
I rely on objective information on market needs when coming up with a new business idea.	44	5.86	1.16
I need to have a thorough understanding of the problems the customers face.	45	6.07	1.06
Before running with a business idea, I compare different alternatives and carefully select the most promising one.	44	5.95	1.11

Category	2023		
	Number of Responses	Average	Standard Deviation
I analyze the problems the customers face and propose solutions consistent with these problems.	44	5.93	1.14
When developing a business idea, I specify the core assumptions underlying that idea.	44	6.07	1.10
When forming a business idea, I need to find a good fit between the product features and market needs.	45	5.73	1.44
For my business idea to be strong, it must meet an important unsatisfied need in the market.	45	5.73	1.55
Great business ideas should not just please me but foremost please the customer.	45	6.02	1.26
I need to make the assumptions underlying my business idea explicit.	46	5.78	1.49
When developing a business idea, I need to stay rational and to control emotions.	45	5.82	1.35
When forming my business idea, it is useful for me to write a business plan or compose a business model canvas.	45	5.91	1.17
When forming my business idea, it is useful for me to specify a value proposition.	45	5.98	1.22

## (2) Idea Testing

Analysis of idea testing showed the following results: 'There is a need to test my business idea in the market': 5.93. 'By testing my business idea, I learn more about its actual value' scored 6.00. 'Testing the core assumptions underlying my business idea is critical for success' scored 6.11. 'When testing my business idea, I have to test the hypotheses underlying the idea' scored 6.11. 'The goal of testing my business idea is not to convince others but to generate objective data about the value of the idea' scored 6.09. 'I need to critically examine the validity of the feedback provided' scored 6.18. 'My business idea can still be a failure despite positive initial feedback (false positive feedback)' scored 6.05. 'My business idea can still be a success despite negative initial feedback (false negative feedback)' scored 6.00. 'In interpreting feedback, I must balance the risk of pursuing bad ideas with

the risk of missing out on great ideas' scored 5.95. 'When testing the business idea, it is helpful for me to use systematic tools such as surveys, experiments, and prototypes' scored 5.93. 'When testing the idea, I focus on assumptions about customer needs' scored 6.14. 'When testing the idea, I focus on assumptions about the feasibility of the idea' scored 5.88. 'When testing the idea, I collect a large enough sample' scored 5.98. 'I need to test the idea in a context similar to the target market' scored 6.24.

<Table 3-11> Idea Testing (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
There is a need to test my business idea in the market.	44	5.93	1.23
By testing my business idea, I learn more about its actual value.	44	6.00	1.30
Testing the core assumptions underlying my business idea is critical for success.	44	6.11	1.07
When testing my business idea, I have to test the hypotheses underlying the idea.	44	6.11	1.13
The goal of testing my business idea is not to convince others but to generate objective data about the value of the idea.	44	6.09	1.16
I need to critically examine the validity of the feedback provided.	44	6.18	1.01
My business idea can still be a failure despite positive initial feedback (false positive feedback).	44	6.05	1.17
My business idea can still be a success despite negative initial feedback (false negative feedback).	44	6.00	1.15
In interpreting feedback, I must balance the risk of pursuing bad ideas with the risk of missing out on great ideas.	44	5.95	1.26
When testing the business idea, it is helpful for me to use systematic tools such as surveys, experiments, and prototypes.	43	5.93	1.19
When testing the idea, I focus on assumptions about customer needs.	44	6.14	0.94
When testing the idea, I focus on assumptions about the feasibility of the idea.	44	5.88	1.26
When testing the idea, I collect a large enough sample.	44	5.98	1.05

I need to test the idea in a context similar to the target market.	44	6.24	0.95
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### (3) Updating Ideas

Analysis of updating ideas showed the following results: 'I update my business idea based on the feedback received' scored 5.91. 'I update my business idea with the goal to improve its product-market fit' scored 5.93. 'I'm willing to abandon the idea if the conditions for it to work are no longer valid' scored 5.64. 'In updating the business idea, I try to balance my own convictions about the idea with feedback received from others' scored 5.66. 'I am open to updating my initial business idea based on new information' scored 5.93. 'I need to be open to negative information' scored 5.93. 'I need to make sure that the updated product not just fits the customer who participated in testing but also further customers' scored 5.98. 'An important problem in updating the product is that my product may become overly complicated' scored 5.98. 'New ideas about product features should be understood but not blindly obeyed' scored 5.93. 'I need to determine if the updated product generates more traction in the market than the original product' scored 5.98. 'I need to assure that the updated product generates both one-time sales and recurrent sales' scored 6.21.

<Table 3-12> Updating Ideas (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
I update my business idea based on the feedback received.	44	5.91	1.18
I update my business idea with the goal to improve its product-market fit.	44	5.93	1.07
I'm willing to abandon the idea if the conditions for it to work are no longer valid.	44	5.64	1.45
In updating the business idea, I try to balance my own convictions about the idea with feedback received from others.	44	5.66	1.20
I am open to updating my initial business idea based on new information.	44	5.93	1.19

I need to be open to negative information.	44	5.93	1.16
I need to make sure that the updated product not just fits the customer who participated in testing but also further customers.	42	5.98	1.16
An important problem in updating the product is that my product may become overly complicated.	42	5.98	1.30
New ideas about product features should be understood but not blindly obeyed.	41	5.93	1.20
I need to determine if the updated product generates more traction in the market than the original product.	42	5.98	1.14
I need to assure that the updated product generates both one-time sales and recurrent sales.	42	6.21	0.94

#### (4) Lean Startup

Analysis of efforts related to the lean startup approach showed the following results: 'I try to get to a minimum viable product as quickly as possible' scored 5.70. 'I try to test as many ideas as possible' scored 5.70. 'I try to pivot as quickly as possible' scored 5.12.

<Table 3-13> Lean Startup (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
I try to get to a minimum viable product as quickly as possible.	43	5.70	1.36
I try to test as many ideas as possible.	43	5.70	1.29
I try to pivot as quickly as possible.	43	5.12	1.67

#### (5) Reasons for Starting a Business

Analysis of reasons for starting a business showed the following results: 'I analyzed long-run opportunities and selected what I thought would provide the best returns.' scored 5.51. 'I designed and planned business strategies' scored 5.69. 'I organized and implemented control processes to make sure we meet objectives' scored 5.37. 'I researched and selected target markets and did meaningful competitive analysis' scored 5.98. 'I designed and planned production and marketing efforts' scored



5.74.

<Table 3-14> Reasons (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
I analyzed long-run opportunities and selected what I thought would provide the best returns.	43	5.51	1.44
I designed and planned business strategies.	42	5.69	1.30
I organized and implemented control processes to make sure we meet objectives.	43	5.37	1.63
I researched and selected target markets and did meaningful competitive analysis.	42	5.98	1.14
I designed and planned production and marketing efforts.	43	5.74	1.28

## (6) Entrepreneurial Alertness and Knowledge in Specific Domains

The analysis of entrepreneurial alertness and knowledge in specific domains showed the following results: 'Gut feeling for potential opportunities' scored 5.81. 'Knowledge of the needs of the target customers' scored 5.65. 'Knowledge of the technology you are using with your product' scored 5.98.

<Table 3-15> Reasons/Alertness/Knowledge in Specific Domains (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
(Alertness) Gut feeling for potential opportunities	42	5.81	1.42
(Knowledge in Specific Domains) Knowledge of the needs of the target customers	43	5.65	1.41
(Knowledge in Specific Domains) Knowledge of the technology you are using with your product	43	5.98	1.13

## 5. Characteristics of Entrepreneurs

### (1) Machiavellianism

Analysis of Machiavellianism showed the following results: 'I manipulate others to get my way' scored 3.89. 'I have used deceit or lied to get my way' scored 3.35. 'I have used flattery to get my way' scored 4.05. 'I exploit others towards my own end' scored 3.35. Compared to the 2021 survey results, factors such as deceit/lying, flattery, and exploitation have increased.

<Table 3-16> Machiavellianism

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I manipulate others to get my way.	50	4.20	44	3.89	2.04
I have used deceit or lied to get my way.	50	3.00	43	3.35	2.11
I have used flattery to get my way.	50	3.00	44	4.05	2.17
I exploit others towards my own end.	50	3.28	43	3.35	2.27

### (2) Psychopathic Traits

The analysis of psychopathic traits showed the following results: 'I lack remorse' scored 2.74. 'I am unconcerned with the morality of my actions' scored 2.98. 'I am callous or insensitive' scored 3.41. 'I am cynical' scored 3.27. Compared to the 2021 survey results, factors such as morality and callousness/insensitivity have increased.

<Table 3-17> Psychopathic Traits

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I lack remorse.	51	2.78	43	2.74	2.10
I am unconcerned with the morality of my actions.	49	2.73	44	2.98	2.22

I am callous or insensitive.	50	3.24	44	3.41	2.18
I am cynical.	50	3.48	44	3.27	2.25

### (3) Narcissism

The analysis of narcissism showed the following results: 'I want others to admire me' scored 5.26. 'I want others to pay attention to me' scored 5.09. 'I want to seek prestige or status' scored 5.32. 'I expect special favors from others' scored 4.95. Compared to the 2021 survey results, all factors have increased.

<Table 3-18> Narcissism

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I want others to admire me.	50	4.82	43	5.26	1.73
I want others to pay attention to me.	50	4.70	43	5.09	1.68
I want to seek prestige or status.	50	5.18	44	5.32	1.69
I expect special favors from others.	50	4.62	43	4.95	1.90



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| Chapter 4 |

# Analysis of Prospective Entrepreneurs



## | Chapter 4 | Analysis of Prospective Entrepreneurs

### 1. Demographic Characteristics

The sample of prospective entrepreneurs consisted of 332 prospective entrepreneurs. Of these, 56.9% (189 individuals) were male. In terms of educational background, the majority had completed a bachelor's degree, accounting for 83.7% (278 individuals). The most common major was engineering (including architecture), accounting for 23.5% (78 individuals).

<Table 4-33> Respondents' Demographic Characteristics

Category		Frequency	Percentage (%)
Gender	Male	189	56.9
	Female	138	41.6
	Others	-	-
	No response	4	1.2
Education	Undergraduate (Bachelor level)	278	83.7
	Graduate (Master level)	8	2.4
	Ph.D	31	9.3
	Other (e.g., MBA, etc.)	15	4.5
	No response	-	-
	Arts/Humanities (Culture, History, Linguistics, Philosophy, Religion, etc.)	15	4.5
	Business Administration	64	19.3
	Computer/IT	48	14.5
	Economics	4	1.2
	Engineering (including Architecture)	78	23.5
	Medical/Life Sciences	41	12.3
	Law	1	0.3
	Mathematics	2	0.6
	Natural Sciences	24	7.2
	Arts and Sciences (Fine Arts, Design, Dramatics,	27	8.1

	Music, etc.)		
	Social Sciences (Psychology, Political Science, Education, etc.)	16	4.8
	Others	12	3.6
	No response	-	-
	Total	332	100.0



## 2. Entrepreneur Characteristics

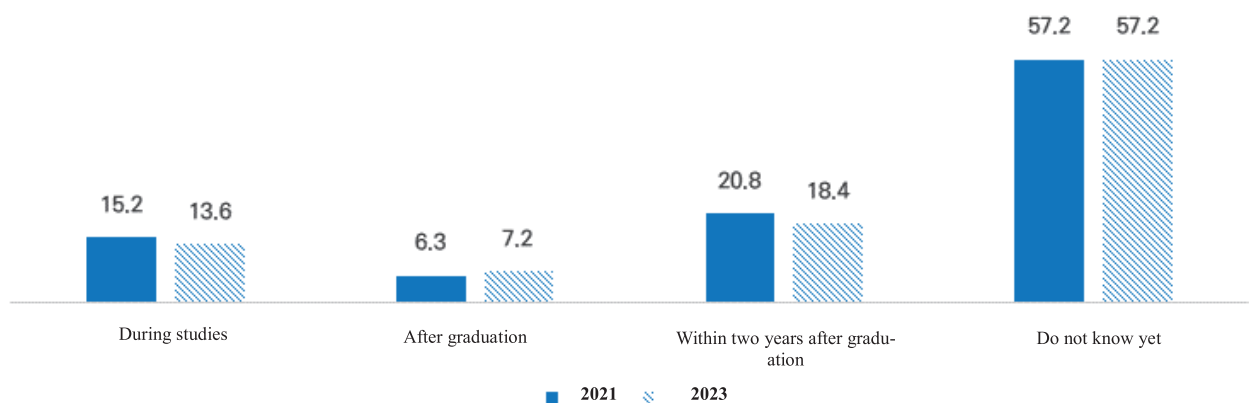
### (1) Plans to Complete Company Formation Procedures

Analysis of plans to complete the company formation procedures showed the following results: 'Do not know yet': 57.2% (190 individuals) – the highest response. 'Within two years after graduation': 18.4% (61 individuals). 'During studies': 13.6% (45 individuals). 'After graduation': 7.2% (24 individuals). Compared to the 2021 survey results, similar patterns were observed.

<Table 4-34> Plans to Complete Company Formation Procedures

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
During studies	41	15.2	45	13.6
After graduation	17	6.3	24	7.2
Within two years after graduation	56	20.8	61	18.4
Do not know yet	154	57.2	190	57.2
No response	1	0.4	12	3.6
Total	269	100.0	332	100.0

<Figure 4-1> Plans to Complete Company Formation Procedures



### (2) Full-time Entrepreneurship After Graduation

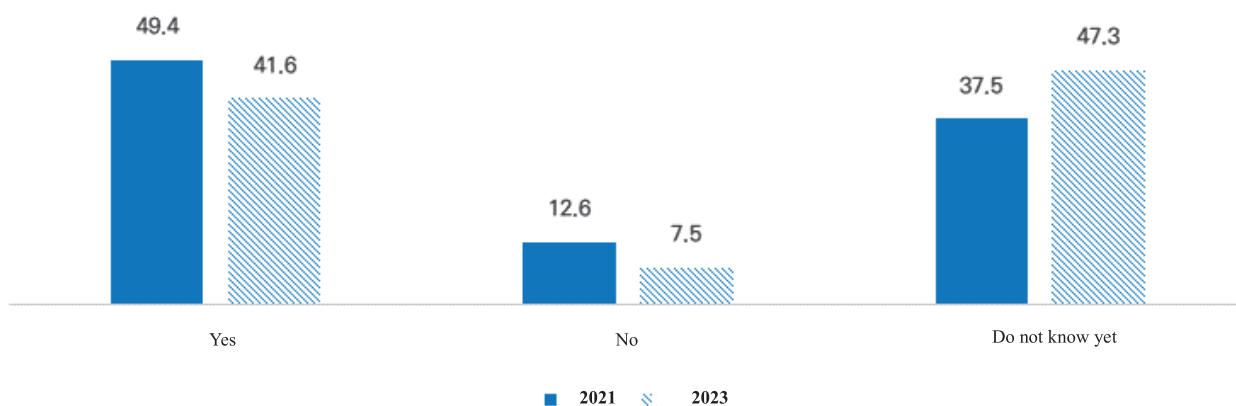
Regarding whether they plan to pursue entrepreneurship as a full-time job after graduation, 41.6%

(138 individuals) responded 'yes,' and 7.5% (25 individuals) responded 'no.' Also, 47.3% (157 individuals) responded 'Do not know yet,' indicating a significantly high level. Compared to the 2021 survey results, the number of 'Do not know yet' responses has increased, while both positive and negative responses have decreased.

<Table 4-3> Full-time Entrepreneurship After Graduation

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	133	49.4	138	41.6
No	34	12.6	25	7.5
Do not know yet	101	37.5	157	47.3
No response	1	0.4	12	3.6
Total	269	100.0	332	100.0

<Figure 4-2> Comparison of Full-time Entrepreneurship After Graduation



### (3) Previous Entrepreneurial Experience

When asked if they had any previous entrepreneurial experience, 4.5% (15 individuals) responded 'yes,' while 93.7% (311 individuals) responded 'no.' Compared to the 2021 survey results, previous entrepreneurial experience has decreased.

<Table 4-4> Previous Entrepreneurial Experience

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	31	11.5	15	4.5
No	237	88.1	311	93.7
No response	1	0.4	6	1.8
Total	269	100.0	332	100.0

### 3. Characteristics of Prospective Businesses

#### (1) Ownership Share Plans

Planned ownership share in the businesses were as follows: Less than 49%: 15.7% (52 individuals). 50%: 28.0% (93 individuals). 51% or more: 49.7% (165 individuals). The proportion of prospective entrepreneurs planning to hold ownership share of 51% or more has slightly decreased from 50.2% in 2021 to 49.7% in 2023.

<Table 4-5> Ownership Share Plans

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
0-49% (minority owner)	56	20.8	52	15.7
50%	75	27.9	93	28.0
51-100% (majority owner)	135	50.2	165	49.7
No response	3	1.1	22	6.6
Total	269	100.0	332	100.0

#### (2) Co-Founders

Regarding plans to start the company with co-founders: No: 48.5% (161 individuals). One co-founder: 28.6% (95 individuals). Two co-founders: 9.9% (33 individuals). Three or more co-founders: 9.6% (32 individuals). Compared to the 2021 survey results, the proportion of those planning to start without co-founders has slightly increased.

<Table 4-6> Co-Founders

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
No	126	46.8	161	48.5
One co-founder	58	21.6	95	28.6
Two co-founders	50	18.6	33	9.9

Three or more co-founders	33	12.3	32	9.6
No response	2	0.7	11	3.3
Total	269	100.0	332	100.0

### (3) Locally Residing Entrepreneurship

When asked if they had plans for locally residing entrepreneurship, 25.3% (84 individuals) responded ‘yes,’ while 72.0% (239 individuals) responded ‘no.’

<Table 4-7> Locally Residing Entrepreneurship

Category	2023	
	Frequency	Percentage (%)
Yes	84	25.3
No	239	72.0
No response	9	2.7
Total	332	100.0

### (4) Industrial Sector of Prospective Businesses

The industrial sector of the prospective businesses was as follows: Primary sector: 3.9% (13 individuals), Secondary sector: 13.9% (45 individuals), Tertiary sector: 16.9% (56 individuals), Quaternary sector: 34.0% (113 individuals), Other/Uncertain: 28.9% (96 individuals).

<Table 4-8> Industrial Sector of Prospective Businesses

Category	2023	
	Frequency	Percentage (%)
Primary sector	13	3.9
Secondary sector	45	13.6
Tertiary sector	56	16.9
Quaternary sector	113	34.0
Other/Uncertain	96	28.9

No response	9	2.7
Total	332	100.0

## (5) Relevance of Business Ideas

Analysis of the relevance of their business ideas showed the following results: 'New technology' scored 4.28. 'Climate change and/or the quest for sustainability' scored 4.16. 'Demographic change' scored 4.17. 'Changed laws and/or regulations' scored 3.75. 'Sociocultural trends' scored 4.34. 'Societal crises' scored 3.80. 'Other, major societal developments' scored 4.37.

<Table 4-9> Relevance of Business Ideas (New Item)

Category	2023		
	Number of Responses	Average	Standard Deviation
New technology (e.g., AI)	319	4.28	1.96
Climate change and/or the quest for sustainability	318	4.16	1.87
Demographic change (e.g., aging population, baby boom, immigration)	320	4.17	1.92
Changed laws and/or regulations	320	3.75	1.86
Sociocultural trends (e.g., animal welfare, pet products, LGBT+ rights/culture)	320	4.34	1.95
Societal crises (e.g., financial crisis, Ukraine war)	320	3.80	1.95
Other, major societal developments	318	4.37	1.80

## 4. Characteristics of Prospective Entrepreneurs

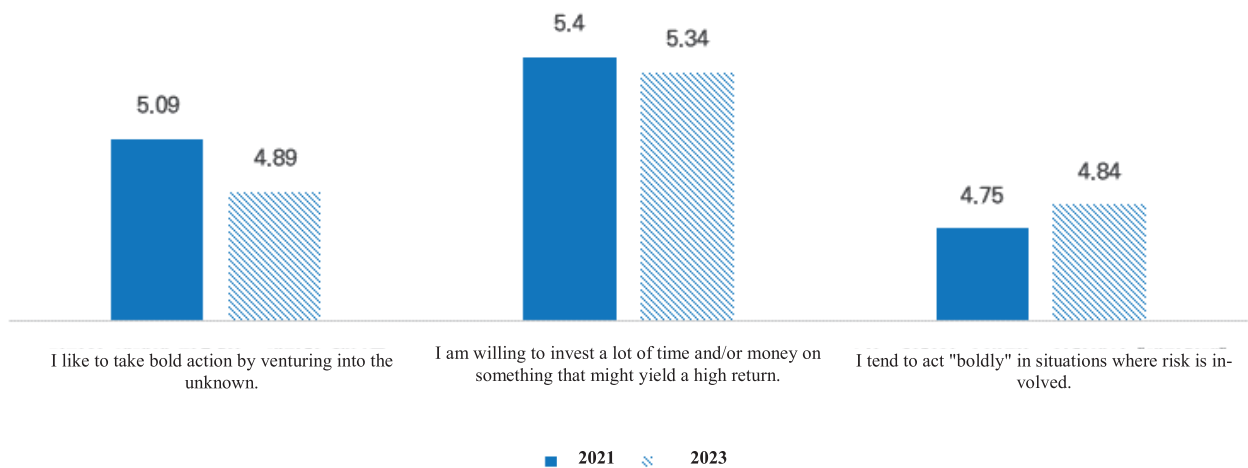
### (1) Risk Tolerance

Analysis of risk tolerance among prospective entrepreneurs showed the following results: 'I like to take bold action by venturing into the unknown' scored 4.89. 'I am willing to invest a lot of time and/or money on something that might yield a high return' scored 5.34. 'I tend to act "boldly" in situations where risk is involved' scored 4.84. Compared to the 2021 survey results, the willingness to venture into unknown territories and invest time and money has slightly decreased.

<Table 4-10> Risk Tolerance

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I like to take bold action by venturing into the unknown.	267	5.09	320	4.89	1.61
I am willing to invest a lot of time and/or money on something that might yield a high return.	266	5.40	320	5.34	1.44
I tend to act "boldly" in situations where risk is involved.	265	4.75	320	4.84	1.58

<Figure 4-3> Comparison of Risk Tolerance



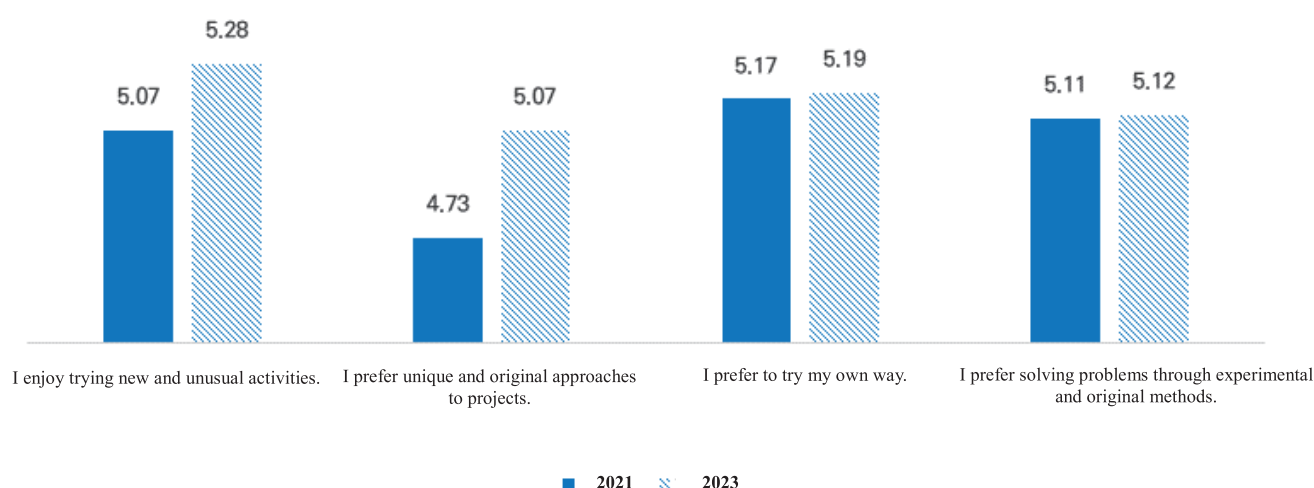
## (2) Innovativeness

Analysis of innovativeness among prospective entrepreneurs showed the following results: 'I often like to try new and unusual activities that are not typical but not necessarily risky' scored 5.28. 'In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before' scored 5.07. 'I prefer to try my own unique way when learning new things rather than doing it like everyone else does' scored 5.19. 'I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems' scored 5.12. Compared to the 2021 survey results, overall innovativeness has increased.

<Table 4-11> Innovativeness

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I often like to try new and unusual activities that are not typical but not necessarily risky.	267	5.07	322	5.28	1.34
In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before.	266	4.73	321	5.07	1.36
I prefer to try my own unique way when learning new things rather than doing it like everyone else does.	266	5.17	320	5.19	1.42
I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems.	266	5.11	319	5.12	1.42

<Figure 4-4> Comparison of Innovativeness



### (3) Proactiveness

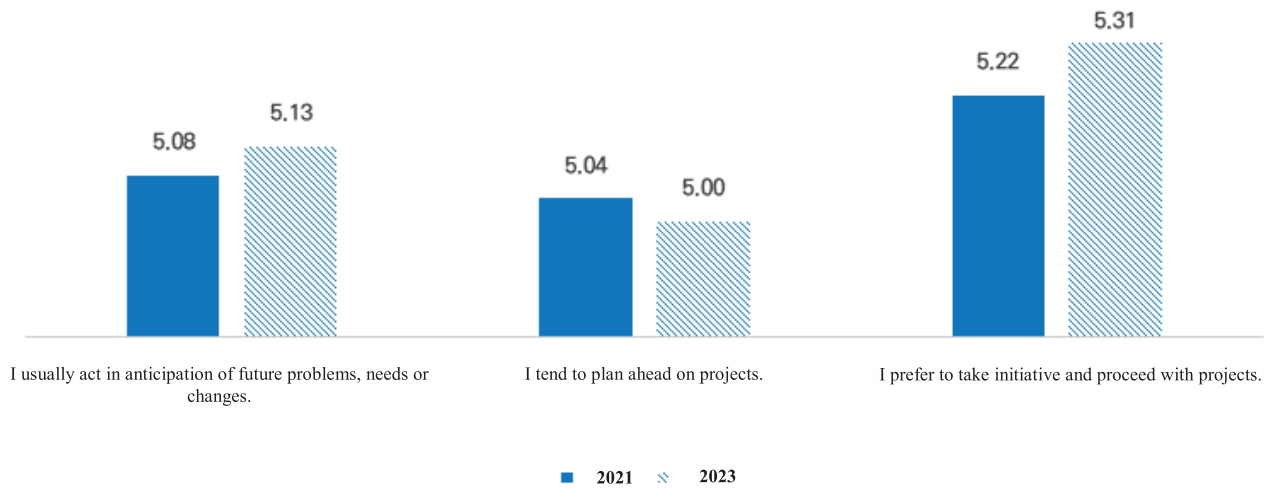
Analysis of proactiveness among prospective entrepreneurs showed the following results: 'I usually act in anticipation of future problems, needs or changes' scored 5.13. 'I tend to plan ahead on projects' scored 5.00. 'I prefer to "step-up" and get things going on projects rather than sit and wait for someone else to do it' scored 5.31. Compared to the 2021 survey results, the tendency to anticipate future needs and to take initiative has increased.



<Table 4-12> Proactiveness

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I usually act in anticipation of future problems, needs or changes.	267	5.08	320	5.13	1.31
I tend to plan ahead on projects.	267	5.04	320	5.00	1.43
I prefer to "step-up" and get things going on projects rather than sit and wait for someone else to do it.	267	5.22	319	5.31	1.34

<Figure 4-5> Comparison of Proactiveness





**2023 GUESSS**

2023 Global University Entrepreneurial  
Spirit Students' Survey

| Chapter 5 |

# **Analysis of Students with Entrepreneurial Parents**



## | Chapter 5 | Analysis of Students with Entrepreneurial Parents

### 1. Demographic Characteristics

The sample of students with entrepreneurial parents consisted of 269 prospective entrepreneurs. Of these, 55.4% (149 individuals) were female. In terms of educational background, the majority had completed a bachelor's degree, accounting for 78.1% (210 individuals). The most common major was engineering (including architecture), accounting for 23.8% (64 individuals).

<Table 5-1> Respondents' Demographic Characteristics

	Category	Frequency	Percentage (%)
Gender	Male	119	44.2
	Female	149	55.4
	Others	1	0.4
	No response	-	-
Education	Undergraduate (Bachelor level)	210	78.1
	Graduate (Master level)	19	7.1
	Ph.D	32	11.9
	Other (e.g., MBA, etc.)	5	1.9
	No response	3	1.1
Major	Arts/Humanities (Culture, History, Linguistics, Philosophy, Religion, etc.)	18	6.7
	Business Administration	46	17.1
	Computer/IT	27	10.0
	Economics	5	1.9
	Engineering (including Architecture)	64	23.8
	Medical/Life Sciences	40	14.9
	Law	2	0.7
	Mathematics	-	-
	Natural Sciences	33	12.3

	Arts and Sciences (Fine Arts, Design, Dramatics, Music, etc.)	14	5.2
	Social Sciences (Psychology, Political Science, Education, etc.)	10	3.7
	Others	10	3.7
	No response	-	-
	Total	269	100.0

## 2. Individual Characteristics of Students with Entrepreneurial Parents

### (1) Personal Ownership Share

Regarding the ownership share in their parent's company, 6.6% (22 individuals) responded 'yes,' and 69.9% (232 individuals) responded 'no.' Compared to the 2021 survey results, there has been an increase in respondents who own shares.

<Table 5-2> Ownership of Shares

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	15	4.7	22	8.2
No	286	89.7	232	86.2
No response	18	5.6	15	5.6
Total	319	100.0	269	100.0

### (2) Work Experience in Parent's Company

Regarding work experience in their parent's company, 18.1% (60 individuals) responded 'yes,' while 59.9% (199 individuals) responded 'no.' Compared to the 2021 survey results, there has been a decrease in the number of respondents with work experience in their parent's company.

<Table 5-3> Work Experience in Parent's Company

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	84	26.3	60	22.3
No	222	69.6	199	74.0
No response	13	4.1	10	3.7
Total	319	100.0	269	100.0

### (3) Siblings

Regarding the presence of siblings, 45.7% (123 individuals) responded that they have no siblings,

37.2% (100 individuals) have one sibling, and 13.8% (37 individuals) have two or more siblings. Compared to the 2021 survey results, the proportion of respondents with no siblings has significantly increased.

<Table 5-4> Siblings

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
None	27	8.5	123	45.7
One sibling	191	59.9	100	37.2
Two or more siblings	92	28.8	37	13.8
No response	9	2.8	9	3.3
Total	319	100.0	269	100.0

#### (4) Succession Intentions

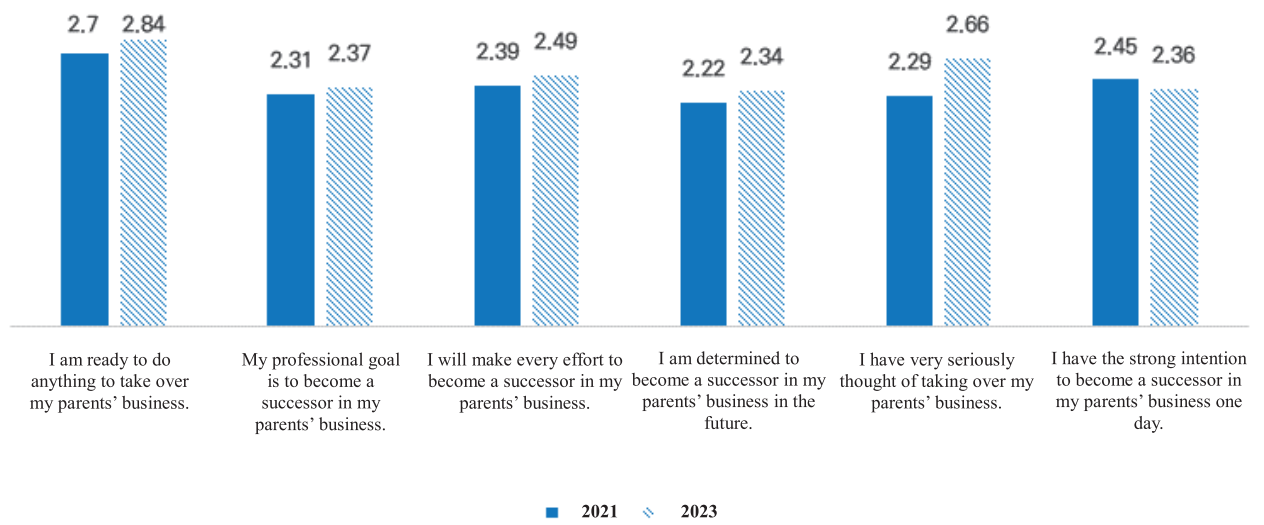
Analysis of intentions to succeed the family business showed the following results: 'I am ready to do anything to take over my parents' business' scored 2.84. 'My professional goal is to become a successor in my parents' business' scored 2.37. 'I will make every effort to become a successor in my parents' business' scored 2.49. 'I am determined to become a successor in my parents' business in the future' scored 2.34. 'I have very seriously thought of taking over my parents' business' scored 2.66. 'I have the strong intention to become a successor in my parents' business one day' scored 2.36.

<Table 5-5> Succession Intentions

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
I am ready to do anything to take over my parents' business.	305	2.70	260	2.84	1.70
My professional goal is to become a successor in my parents' business.	305	2.31	259	2.37	1.60
I will make every effort to become a successor in my parents' business.	305	2.39	259	2.49	1.72
I am determined to become a successor in my parents' business in the future.	305	2.22	258	2.34	1.70
I have very seriously thought of taking over my parents' business.	304	2.29	255	2.66	1.79
I have the strong intention to become a successor in my parents' business one day.	304	2.45	254	2.36	1.61



<Figure 5-1> Succession Intentions



### 3. Characteristics and Performance of Business

#### (1) Direct Management by Parents

Regarding whether the parents directly manage the company they founded, 61.1% (167 individuals) responded 'yes,' while 34.2% (92 individuals) responded 'no.' Compared to the 2021 survey results, the proportion of direct management by parents has slightly decreased.

<Table 5-6> Direct Management by Parents

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	227	71.2	167	62.1
No	73	22.9	92	34.2
No response	19	6.0	10	3.7
Total	319	100.0	269	100.0

#### (2) Family Ownership Share

Ownership share that is in the hands of your family were as follows: Less than 49%: 23.0% (62 individuals). 50%: 10.4% (28 individuals). 51% or more: 49.8% (134 individuals). The proportion of respondents whose family owns 51% or more of the shares in their parent's company has slightly increased from 21.9% in 2021 to 23.0% in 2023.

<Table 5-7> Family Ownership Share

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
0-49% (minority owner)	70	21.9	62	23.0
50%	31	9.7	28	10.4
51-100% (majority owner)	168	52.7	134	49.8
No response	50	15.7	45	16.7
Total	319	100.0	269	100.0

### (3) Family Business

Regarding whether they consider the company founded by their parents to be a family business, 30.1% (81 individuals) responded 'yes,' while 62.8% (169 individuals) responded 'no.' Compared to the 2021 survey results, the proportion of respondents who consider their business as a family business has significantly increased.

<Table 5-8> Family Business

Category	2021		2023	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	55	17.2	81	30.1
No	243	76.2	169	62.8
No response	21	6.6	19	7.1
Total	319	100.0	269	100.0

### (4) Industrial Sector of Parents' Business

The industrial sector of the parents' business was as follows: Primary sector: 9.6% (32 individuals), Secondary sector: 25.3% (84 individuals), Tertiary sector: 17.2% (57 individuals), Quaternary sector: 3.0% (10 individuals), Other/Uncertain: 22.3% (74 individuals).

<Table 5-9> Industrial Sector of Parents' Business

Category	2023	
	Frequency	Percentage (%)
Primary sector	32	11.9
Secondary sector	84	31.2
Tertiary sector	57	21.2
Quaternary sector	10	3.7
Other/Uncertain	74	27.5
No response	12	4.5
Total	269	100.0

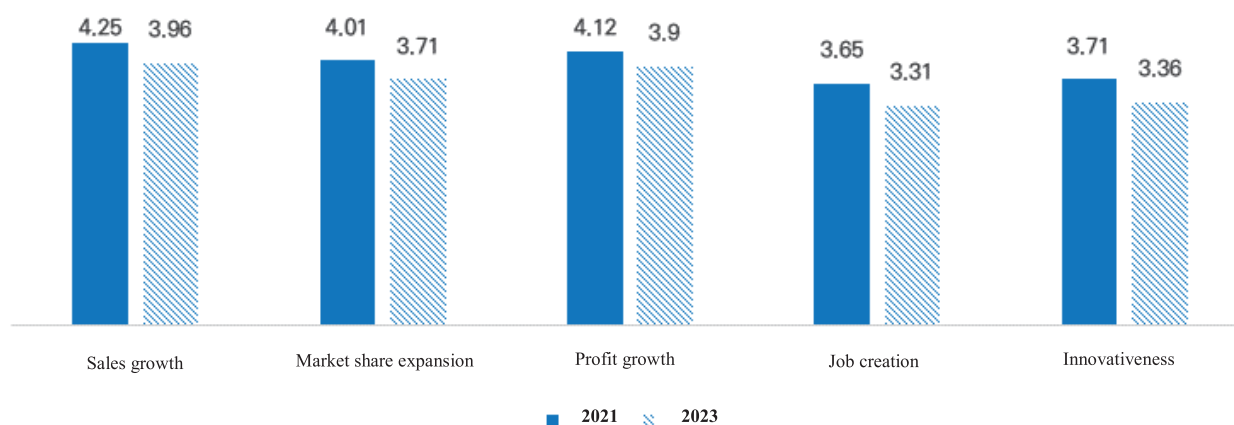
## (5) Perception of Parent-founded Company Performance

Analysis of the performance of parent-founded parents' businesses compared to their competitors showed the following results: 'Sales growth' scored 3.96. 'Market share expansion' scored 3.71. 'Profit growth' scored 3.90. 'Job creation' scored 3.31. 'Innovativeness' scored 3.36. Compared to the 2021 survey results, there is a perception that the performance of parents' business is lower.

<Table 5-10> Perception of Parent-founded Company Performance

Category	2021		2023		
	Number of Responses	Average	Number of Responses	Average	Standard Deviation
Sales growth	289	4.25	238	3.96	1.37
Market share expansion	285	4.01	235	3.71	1.37
Profit growth	285	4.12	234	3.90	1.40
Job creation	285	3.65	235	3.31	1.57
Innovativeness	283	3.71	234	3.36	1.51

<Figure 5-2> Comparison of Perception of Parent-founded Company Performance



**2023 GUESSS**

2023 Global University Entrepreneurial  
Spirit Students' Survey

| Chapter 6 |

# Summary and Implications



## **| Chapter 6 | Summary and Implications**

### **(1) Common Results of Analysis**

Domestic university (including graduate) students plan to seek employment in large and medium-sized businesses after graduation, with only 6.9% planning to start their own business. This is lower compared to other career paths. Compared to the 2021 survey, the proportion of students planning to start their own business has slightly decreased. However, the plan to start a business five years after graduation has increased to 12.9%, nearly doubling. This also shows a slight increase compared to the 2021 survey. The intention to start a business in the future stands at 26.5%, indicating that entrepreneurship is being considered from a mid- to long-term perspective.

Participation in entrepreneurship education has slightly decreased compared to the 2021 survey. However, awareness of the university's environment, education, training, and programs related to entrepreneurship has increased. With improving perceptions of entrepreneurship education, universities and external institutions need to continue running programs to enhance the effectiveness of entrepreneurship education. Furthermore, both entrepreneurial self-efficacy and intention among university (including graduate) students have increased compared to the 2021 survey. This indicates a gradual improvement in the intention to start a business among university (including graduate) students.

Compared to all participating countries in this survey, the intention to start a business in the future is at a similar level. However, the level of considering entrepreneurship as a career path after graduation (including five years post-graduation) is very low. Both entrepreneurial self-efficacy and entrepreneurial intent are also somewhat lower than in other countries. While individual characteristics may contribute to this phenomenon, it appears that the university environment, education, and training are lower compared to other countries. Therefore, universities must strengthen efforts to support entrepreneurial activities. Overall, although entrepreneurial self-efficacy and entrepreneurial intent are somewhat lower compared to other countries, they are gradually improving through the efforts of

universities to support entrepreneurship and spread entrepreneurial culture. Thus, it is essential to strengthen efforts to support entrepreneurship and spread entrepreneurial culture, focusing on universities, to create an environment where young entrepreneurs can take on more challenges.

## (2) Results for Analysis of Entrepreneurs

Among domestic university (including graduate) student entrepreneurs, 37.0% plan to operate their business full-time after graduation, showing a significant decrease compared to 2021. Although the proportion of those uncertain about their plans (responded 'Do not know yet') has increased, the intention to continue operating a business after graduation has declined. Support measures are needed to help university (including graduate) student entrepreneurs continue operating their businesses after graduation.

The category of locally residing businesses is newly investigated, making it difficult to compare with previous surveys, but it is assessed to be somewhat low at 41.3%. In line with recent policy directions supporting locally residing entrepreneurship, there is a need to develop support policies to expand these businesses.

The perception of businesses' business performance has improved compared to the 2021 survey results, indicating an improvement in the perception of business performance. Although it cannot be determined that performance has actually improved as direct performance measurements were not conducted, it is judged that entrepreneurs' perception of performance has improved.

## (3) Results for Analysis of Prospective Entrepreneurs

The proportion of prospective entrepreneurs planning to start a company during their studies has slightly decreased, with the highest proportion planning to start within two years after graduation. Although similar to the 2021 survey results, there is a need to strengthen programs supporting university (including graduate) students in establishing businesses during or immediately after their studies.

About 50% of prospective entrepreneurs plan to secure 51% or more of the ownership of their business, with many indicating plans for solo entrepreneurship. This suggests a somewhat negative



perception of team-based businesses, highlighting the need for alternatives to promote team entrepreneurship culture. Additionally, the proportion of prospective entrepreneurs planning locally residing businesses is very low at 25.3%, indicating a need to expand measures to support this kind of entrepreneurship. These prospective entrepreneurs are finding business ideas based on new technologies, sociocultural trends, and major social phenomena rather than ideas to overcome regulatory changes or societal crises.

#### (4) Results for Analysis of Students with Entrepreneurial Parents

The proportion of university (including graduate) students with entrepreneurial parents who hold shares in their parents' business has increased compared to 2021. The intention to succeed these businesses has also risen. Furthermore, the proportion of students who perceive their parents' businesses as family businesses has increased compared to 2021. However, while the intention to succeed family businesses has grown, it remains very low compared to other items included in this survey.



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## 2023 Global University Entrepreneurial Sprit Student's Survey

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