GUESSS

Global University Entrepreneurial Spirit Students' Survey

Global Student Entrepreneurship 2021: Insights From 58 Countries

2021 GUESSS Global Report

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Preface

Since decades, new ventures created by students have a crucial economic and social impact. The financial and non-financial value that is created as a result is crucially important, particularly in times of global crisis such as in the current COVID-19 pandemic.

As such, it is more important than ever to gain new insights into student entrepreneurship on a global level.

The GUESSS Project (Global University Entrepreneurial Spirit Students' Survey) is dedicated to this mission since 2003. The 2021 Global Report presents the related findings of the 9th data collection wave in the history of GUESSS. It was conducted in early 2021 in 58 countries, with more than 267'000 students providing complete responses, which are all-time records for GUESSS.

Specifically, the report provides insights into students' (entrepreneurial) career choice intentions, their entrepreneurial activities, and the underlying drivers. Moreover, it highlights the impact of the COVID-19 pandemic. Hopefully, the findings will advance and inspire research and practice on student entrepreneurship and entrepreneurship in general.

The 2021 edition of GUESSS would not have been possible without the invaluable effort and support of all country teams, national university partners, EY as the international project partner, and of course the students who responded to the survey invitation. Thank you!

We are already looking forward to the next GUESSS edition in 2023!

Yours sincerely,

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Executive Summary

One project, 58 countries, more than 267'000 students, and one global report with the following key insights:

Regarding students' entrepreneurial intentions and activities

- 17,8 percent of all students intend to be an entrepreneur directly after studies.
- 32,3 percent plan to be an entrepreneur 5 years after completion of studies.
- A central and stable pattern is "first employee, then entrepreneur".
- The career plans of "direct intentional entrepreneurs" are very stable: 82,8 percent of them still intend to be an entrepreneur 5 years later.
- Entrepreneurial intentions have been in a similar range across the last GUESSS editions.
- 28,4 percent of all students are in the process of founding a new venture (nascent entrepreneurs). 10,8 percent already own and run their own business (active entrepreneurs).
- Founding teams are of crucial relevance for both nascent and active founders. 46,5 percent of all nascent entrepreneurs plan to create their business with co-founders; even 62,7 percent of all active entrepreneurs have at least one co-owner.
- The shares of intentional, nascent, and active entrepreneurs differ considerably across countries. The overall pattern is that developing countries exhibit higher numbers than developed countries.
- The new ventures are mostly very young and very small, whereby the entrepreneurs are relatively happy with their performance.

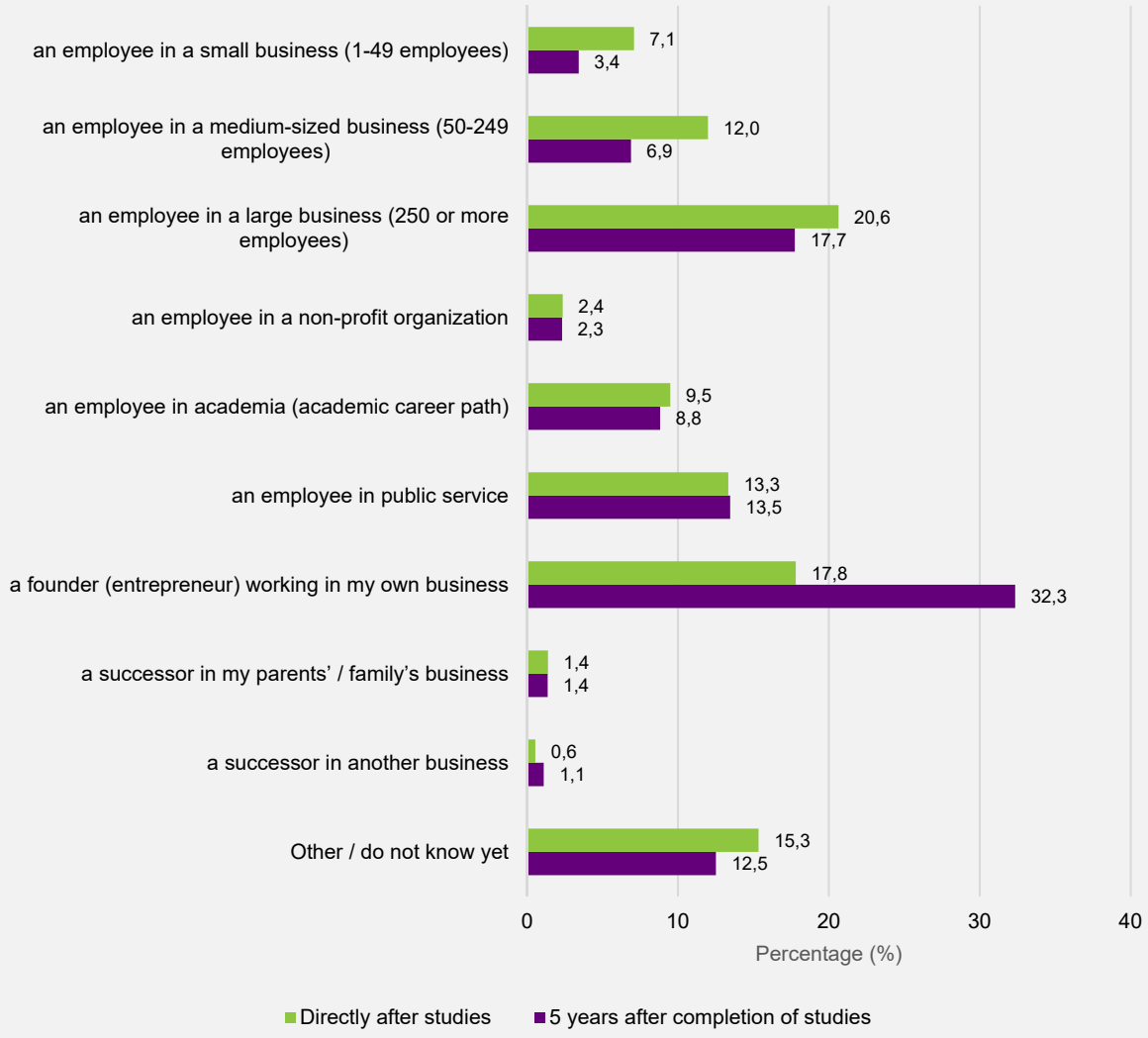
Regarding influencing factors

- Entrepreneurship education and the entrepreneurial climate at the university are key determinants of entrepreneurial intentions and activities.
- Field of study is crucial, with "business and management" students as well as "science of art" students exhibiting the strongest entrepreneurial spirit.
- A gender gap with regard to entrepreneurship can again be observed. The share of intentional, nascent, and active entrepreneurs is consistently smaller among females than among males.
- That the strength of entrepreneurial intentions has been more or less stable across the last GUESSS editions signals that the COVID-19 pandemic does not seem to have affected entrepreneurial intentions substantially.
- Still, 22,1 percent of all nascent entrepreneurs and 33,7 percent of all active entrepreneurs indicate that they plan to create / have created their new venture largely because of the implications of the COVID-19 pandemic.

1. Students' (Entrepreneurial) Career Choice Intentions

Almost 18 percent of all students intend to be an entrepreneur directly after studies, compared to more than 32 percent 5 years after completion of studies. Thus, entrepreneurial intentions (meaning the intention to create a new business)[1] almost double between these two points in time.

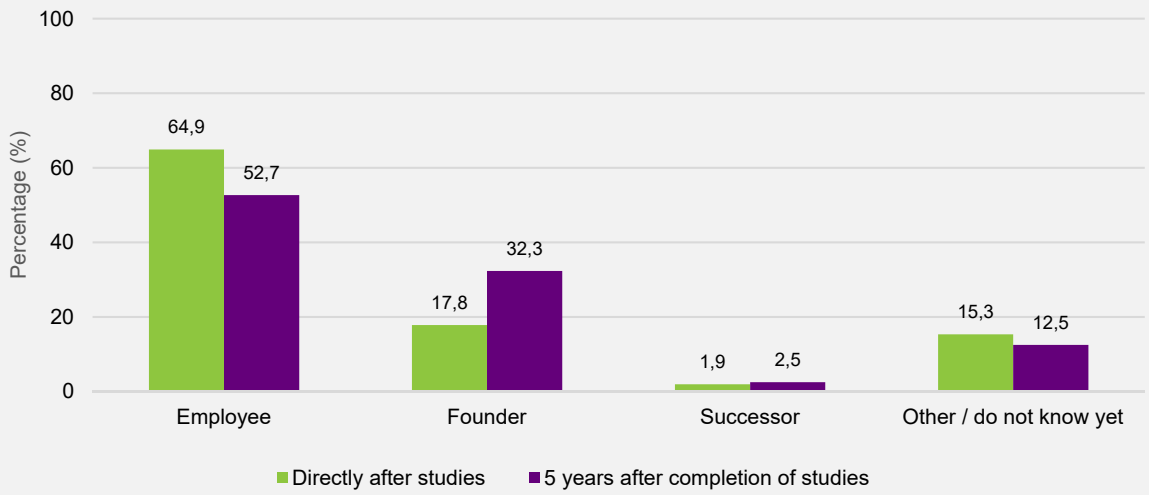
Figure 1. Detailed career choice intentions (N=267'366)



When forming three career groups (i.e., employee, founder, and successor, see Figure 2), we see a clear pattern that is very stable across GUESSS editions (see, for instance, Sieger, Fueglistaller, Zellweger & Braun, 2019): students prefer organizational employment directly after studies (whereby almost 20 percent intend to work in an SME with up to 249 full-time equivalent employees), and many then plan to swing to an entrepreneurial career path within the next 5 years.

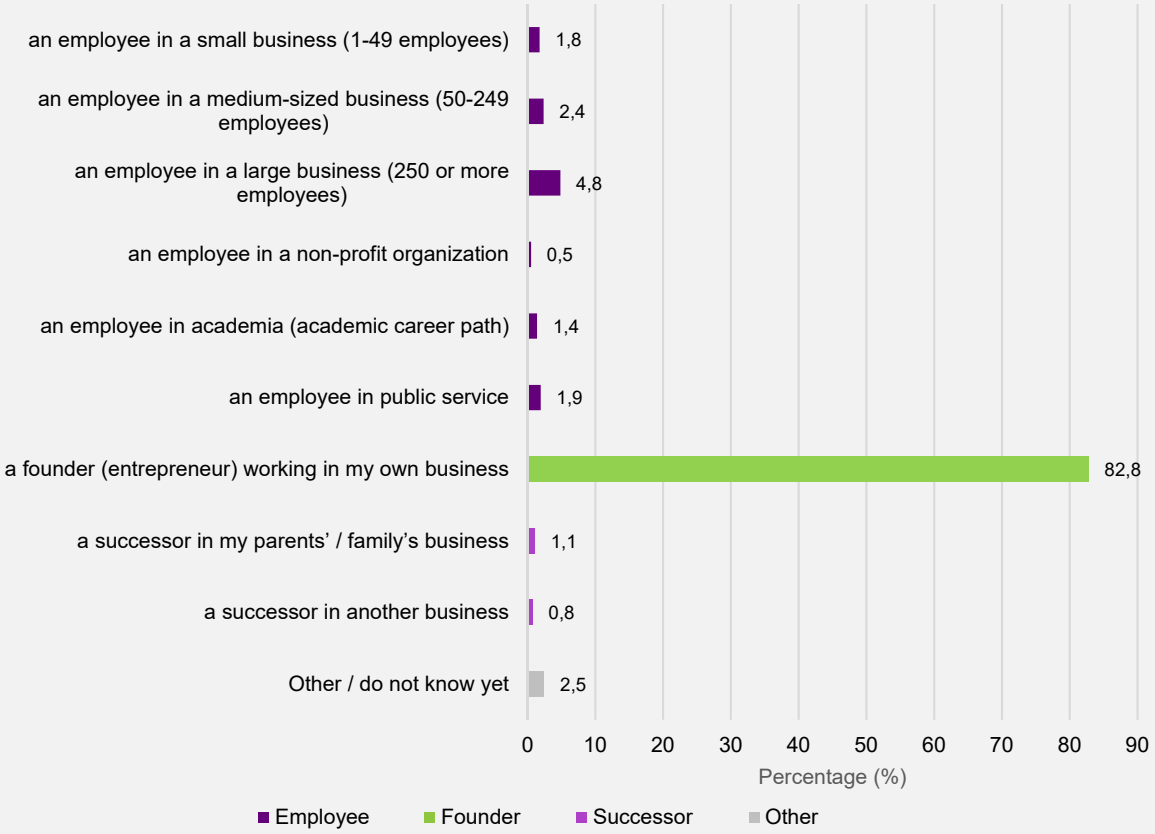
[1] We use the terms "entrepreneurial intentions" and "founding intentions" synonymously. Strictly speaking, also becoming a successor in the parents' firm or in another firm represents a type of entrepreneurial career; we do not refer to these options unless noted otherwise.

Figure 2. Career choice intentions in groups (N=267'366)



For more in-depth insights into the specific career plans of intentional entrepreneurs, Figure 3 shows which career path those students who intend to be entrepreneurs right after studies plan to pursue 5 years later. What is encouraging is that 82,8 percent of these "direct intentional entrepreneurs" still intend to be entrepreneurs; therefore, their entrepreneurial intentions seem to be quite stable.

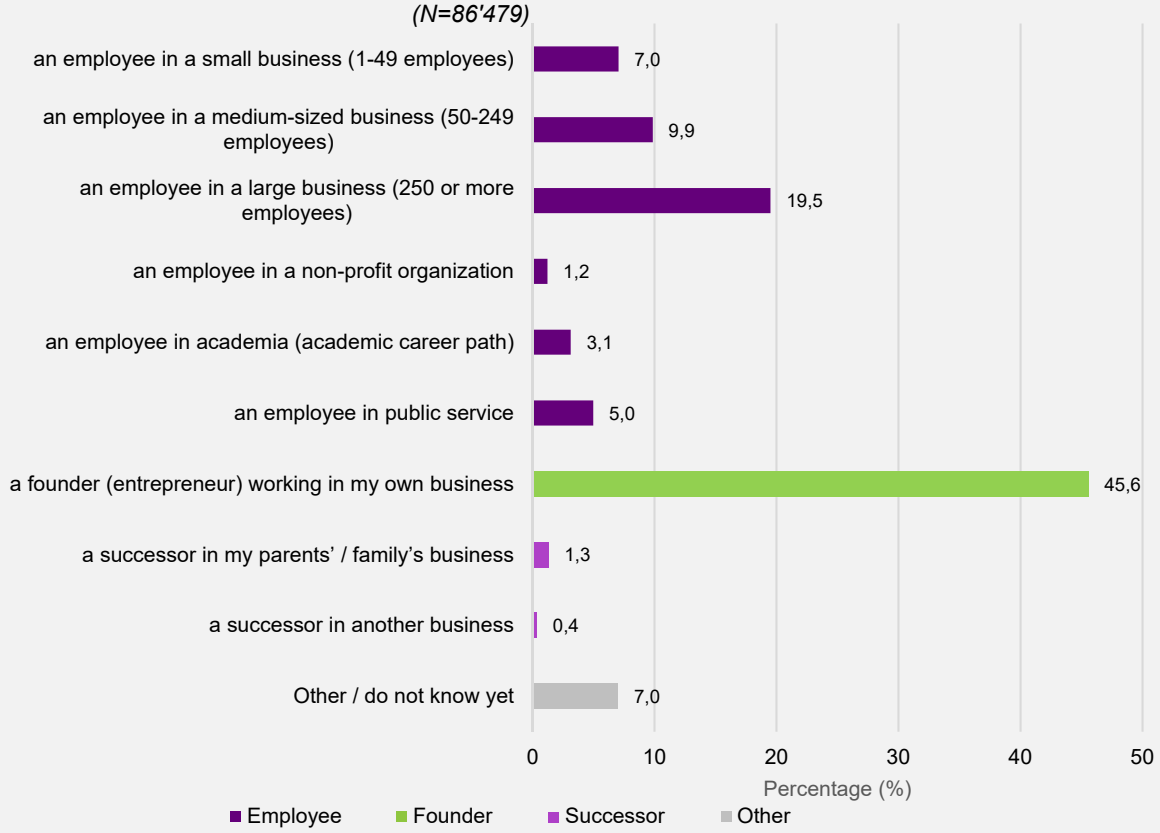
Figure 3. The career plans of direct intentional entrepreneurs 5 years later (N=47'604)



The other way round, Figure 4 shows what those students who intend to be an entrepreneur 5 years after completion of studies plan to do directly after studies.

45,6 percent want to be an entrepreneur directly after studies; almost exactly the same number (45,7 percent) intend to be employees in the private or public sector. This further supports the "first employment, then entrepreneur" pattern we observed above.

Figure 4. The career plans directly after studies of the 5 years intentional entrepreneurs (N=86'479)



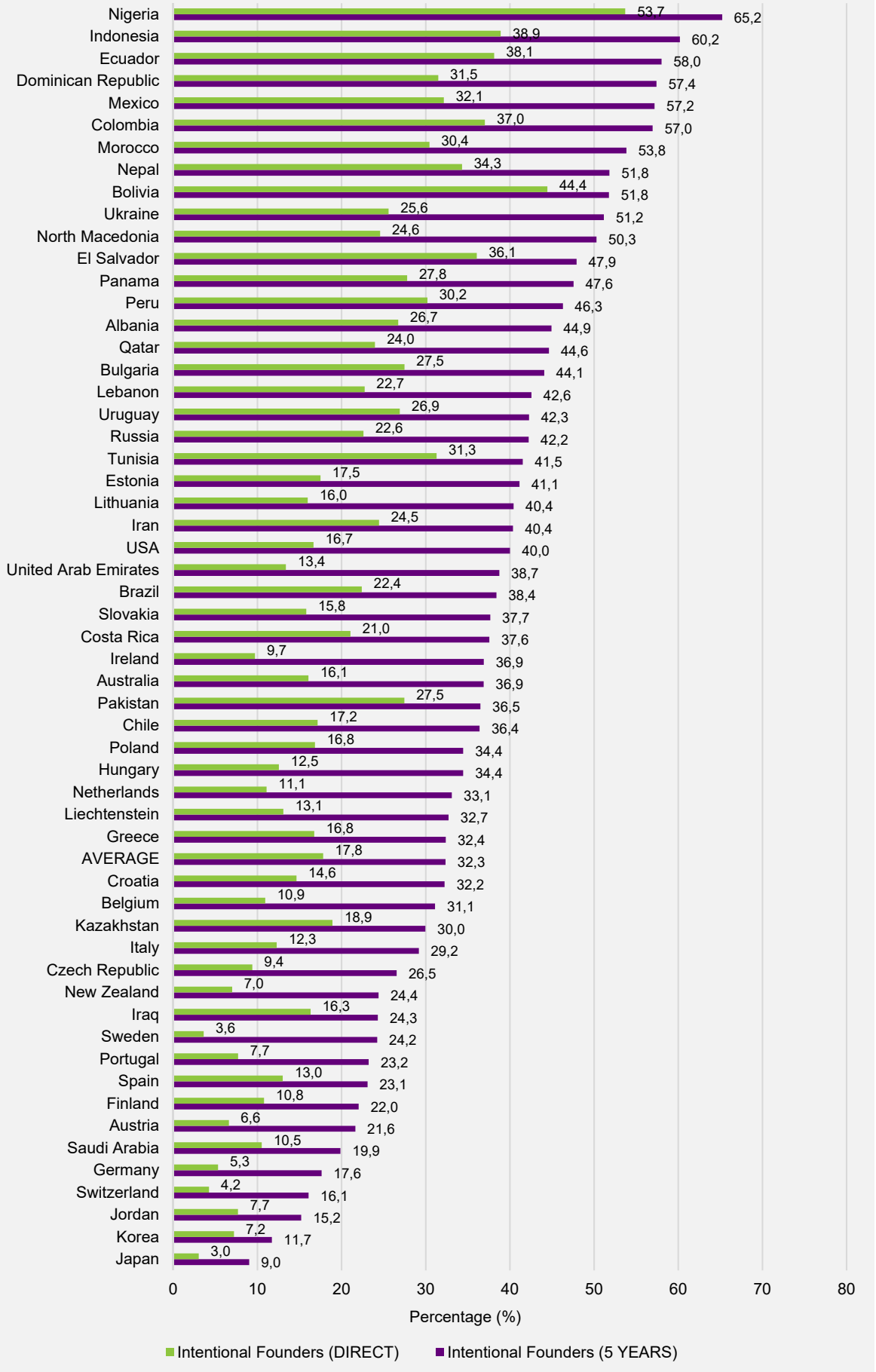
Turning to country comparisons, we look at the share of intentional founders in the 58 countries of GUESSS 2021 in Table 5.[2]

We note that these numbers have to be interpreted with caution. The 58 country samples differ considerably in terms of size, number and types of participating universities, student demographics, and so forth. Still, we see that intentional founders are particularly prominent in developing countries (and in particular, in Latin American countries).

Developed industrial countries rather tend to appear at the bottom of the list, which is a phenomenon already revealed in previous GUESSS editions (Sieger, Fueglistaller & Zellweger, 2014; Sieger, Fueglistaller & Zellweger, 2016; Sieger et al., 2019).

[2] Unless noted otherwise, we only consider countries with at least 20 complete responses in all our country-level comparisons.

Figure 5. Share of intentional founders across countries (N=267'366)



2. Entrepreneurial Intentions Across Time

How have entrepreneurial intentions developed over time? This is a very central and important question, particularly when considering the impact of the COVID-19 pandemic that had started in early 2020, which was after the previous GUESSS edition had been completed (in 2018).

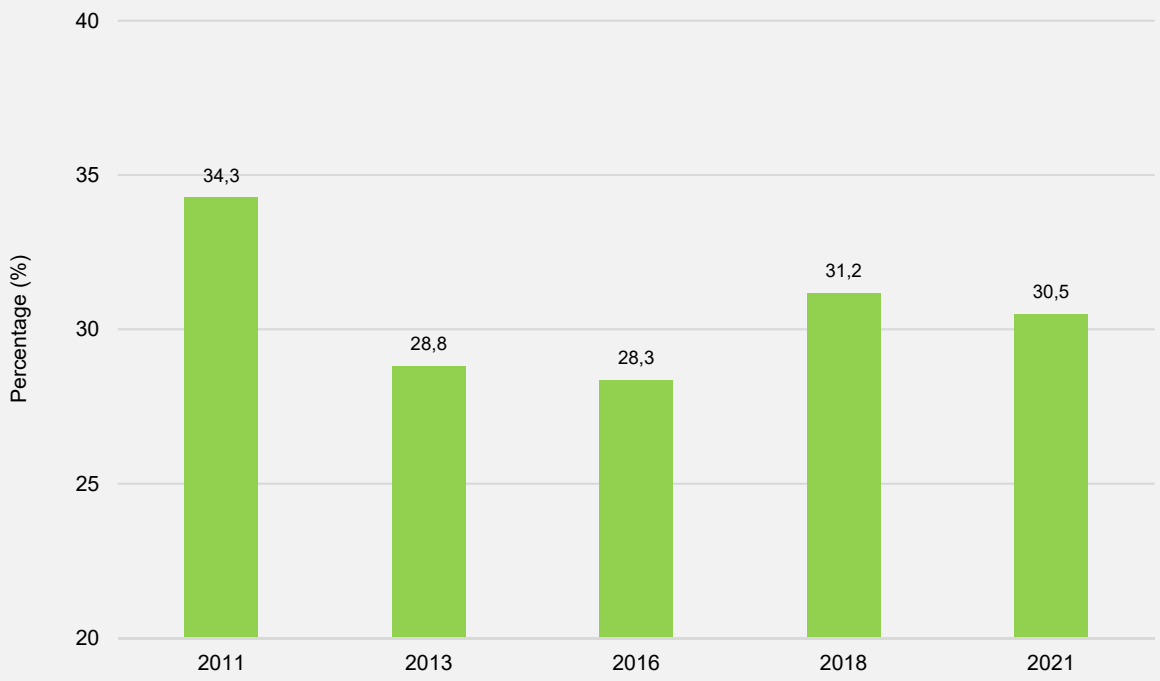
We therefore analyzed data from 13 countries who have participated in the last five GUESSS data collection waves (2021, 2018, 2016, 2013/14, and 2011).[3]

The share of intentional entrepreneurs (5 years after completion of studies) has been the highest in 2011. After a considerable decline in 2013 and another small decline in 2016, there was a noteworthy increase in 2018, with the 2021 number being slightly below the 2018 result.

Overall, entrepreneurial intentions have therefore been quite stable across the last 10 years. More specifically, the 2021 number is in the same rather small range as the three preceding GUESSS editions (i.e., between 28,3 and 31,2 percent), whereby the 2011 results were not substantially higher (34,3 percent). With all the necessary caution when drawing conclusions across GUESSS editions, it thus seems that the COVID-19 pandemic did not have a fundamental impact on students' entrepreneurial intentions.

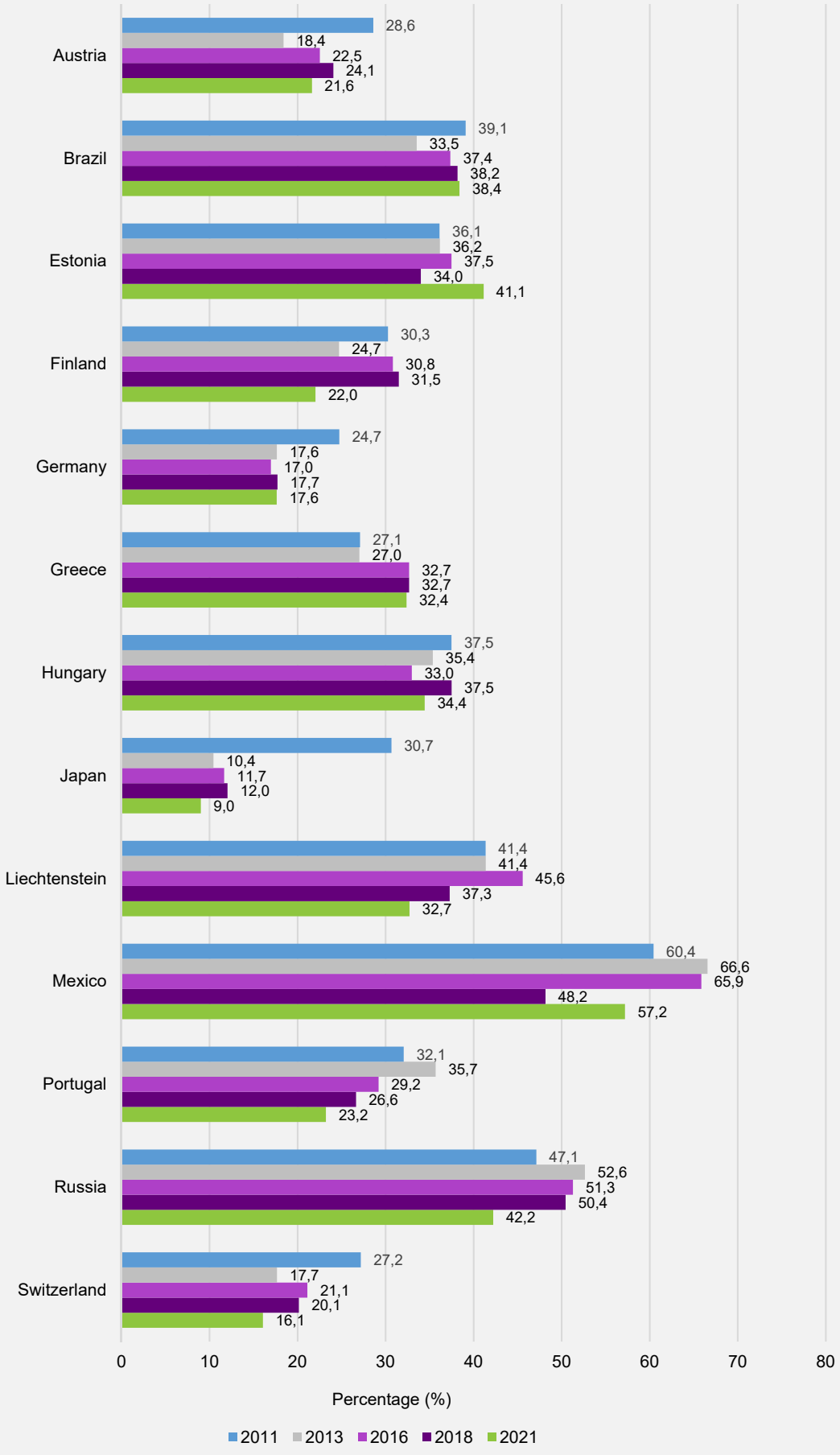
In the 13 investigated countries (see Figure 7), we see different patterns of increasing and decreasing shares of intentional founders that call for further in-depth investigation, particularly when considering the differences between 2018 (pre-COVID) and 2021.

Figure 6. Share of intentional founders (5Y) across GUESSS editions



[3] The number and types of participating universities within each country may vary, as does the number of responding students per university and country. However, the GUESSS country teams remained stable, so we do not assume that there is a systematic variation with regard to the data collection procedure and in particular with regard to the university recruitment strategy. Thus, we believe that our longitudinal findings are reliable and valid. Nevertheless, they have to be interpreted with great care.

Figure 7. Shares of intentional founders (5 years after studies) across countries and time

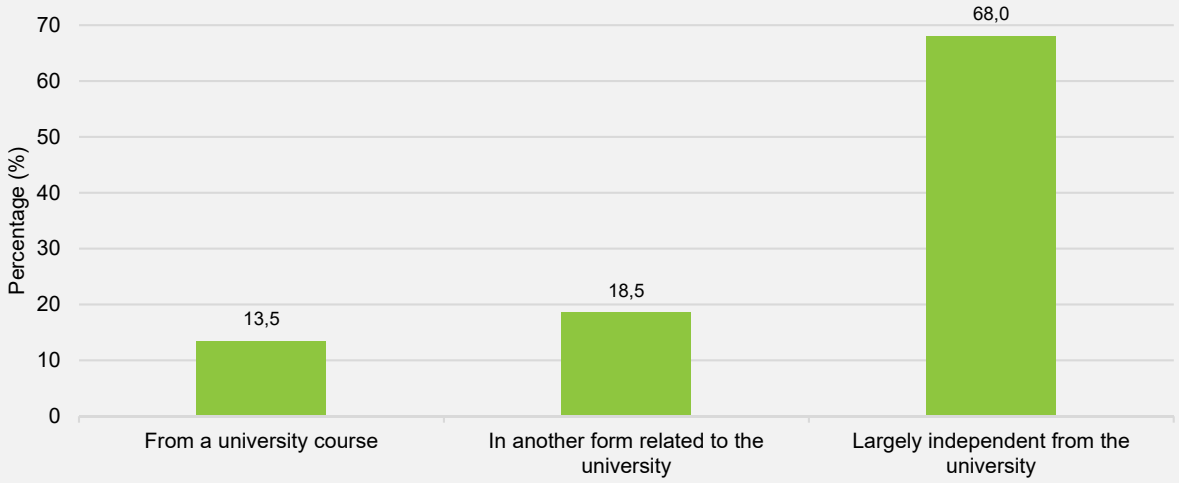


3. Entrepreneurial Activities

3.1 Nascent Entrepreneurs

28,4 percent of all students (N=75'838) indicated that they are in the process of creating their own business, meaning that they are "nascent entrepreneurs". 15 percent of them have already created a business before and are thus serial or portfolio entrepreneurs. Almost one third of the nascent entrepreneurs indicates that their project emerged from the university environment.

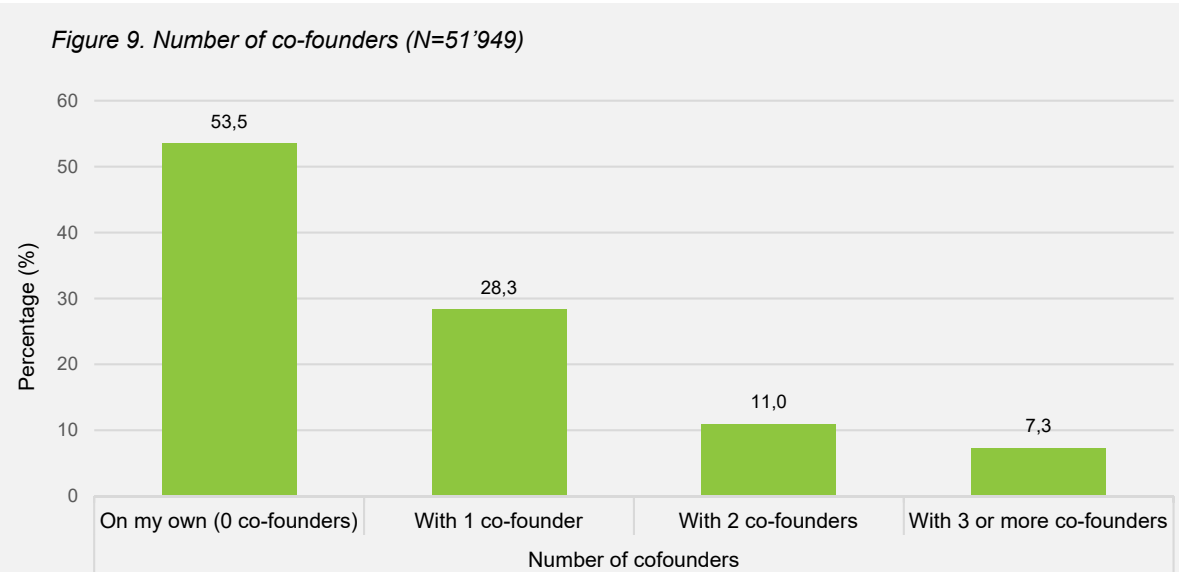
Figure 8. Emergence of the start-up project (N=50'887)



47,4 percent of the nascent entrepreneurs indicate that they plan that this business should become their main occupation after graduation. 22,2 percent said that this is not planned; the rest has not decided upon this yet.

46,5 percent of the nascent entrepreneurs plan to create their business with one or more co-founders. This indicates the relevance of networking and support offerings in order to bring together entrepreneurial teams.

Figure 9. Number of co-founders (N=51'949)

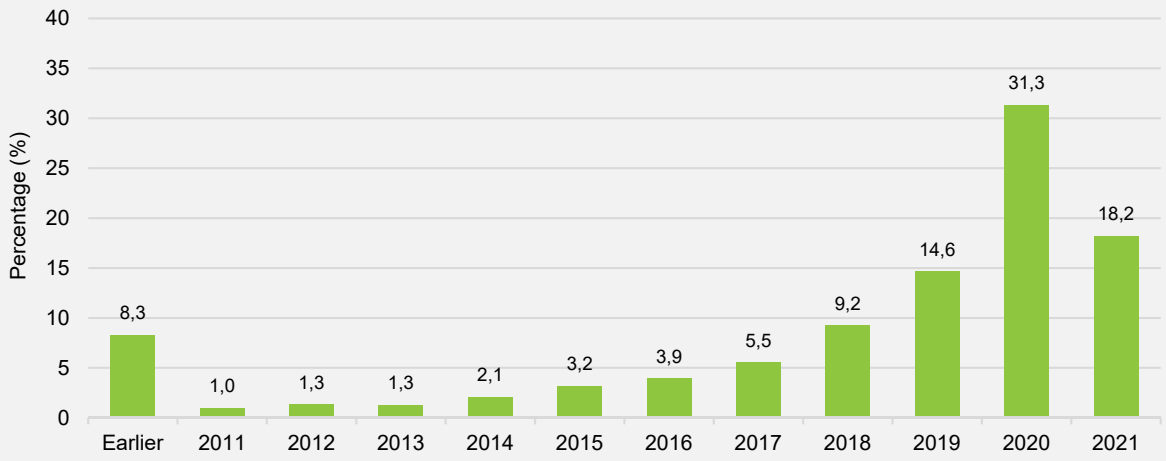


3.2 Active Entrepreneurs

28’877 students indicated that they are active entrepreneurs, meaning that they already own and run their own business (10,8 percent). As shown below, the businesses are very young; almost 20 percent indicate that it has been created in 2021, and more than 30 percent say that this happened in 2020.

In addition, and not surprisingly, the businesses are very small. 27,6 percent of the firms have no employees (yet); around 48 percent have 1 or 2 employees.

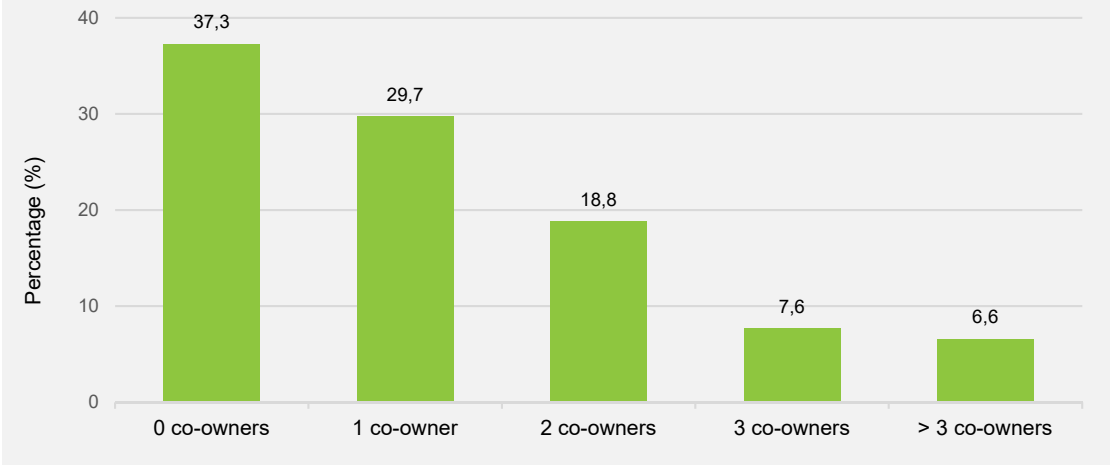
Figure 10. Founding year of active entrepreneurs’ firms (N=25’050)



What is quite surprising is that 30,1 percent of all active entrepreneurs indicated that this business will not be their main occupation after completion of studies; put differently, the created firms might be continued on a part-time basis or might even be abandoned. Still, 33,9 percent of the entrepreneurs have not finally decided on this issue yet.

Referring to co-founders, 37,3 percent of the new ventures do not have a co-owner next to the actual founder; 48,5 percent have 1 or 2 co-owners. This further illustrates the relevance of co-founders and co-owners in student entrepreneurship.

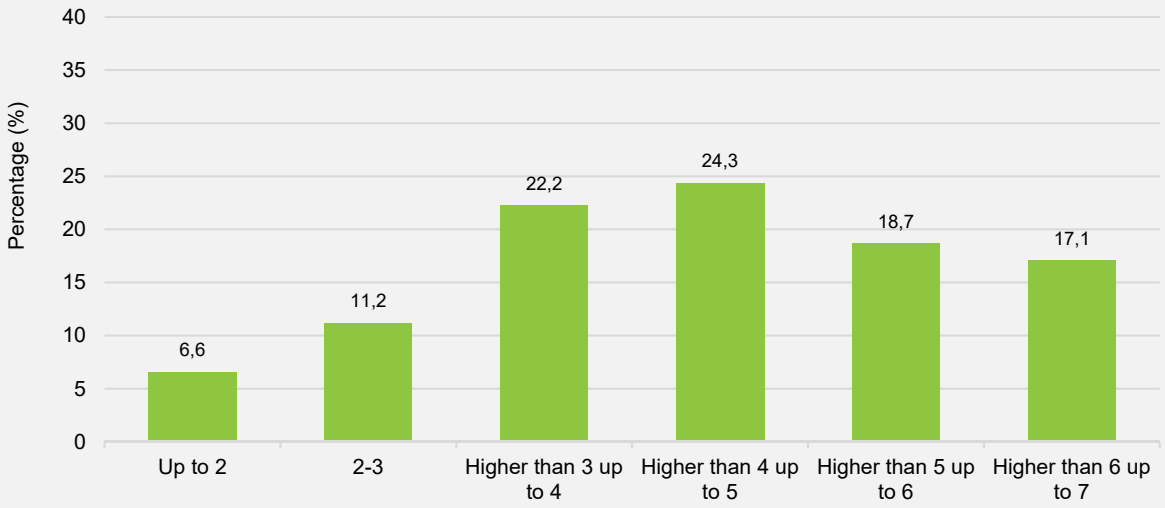
Figure 11. Number of co-owners of active entrepreneurs (N=27’319)



How satisfied are the active entrepreneurs with the performance of their business? We asked them to rate their business' performance as compared to its competitors since its establishment in several dimensions (i.e., sales growth, market share growth, profit growth, job creation, and innovativeness) on a scale from 1 (much worse) to 7 (much better).

The average is 4,54, which is above the neutral point of the scale; almost 36 percent of the active entrepreneurs rate the performance as higher than 5, which are quite encouraging numbers.

Figure 12. Performance ratings of active entrepreneurs (N=27'343)



3.3 The Global View

Comparing the shares of nascent and active entrepreneurs across countries, we reveal a picture very similar to that for entrepreneurial intentions (see Table 13): developing countries tend to be at the top of the list, whereby developed countries rather appear at the bottom.

To assess the corresponding future trend, we also assessed the proportion of nascent versus active entrepreneurs in each country (Table 14). On average, there are 2,6 nascent entrepreneurs for each active entrepreneur, with numerous countries exceeding this number considerably. This signals that the number of active entrepreneurs should increase in the future, while one has to keep in mind that not every nascent entrepreneur will complete the founding process (Khan, Tang & Joshi, 2014). Still, we can interpret this as a positive signal.

Figure 13. Shares of nascent and active entrepreneurs across countries (N=267'366)

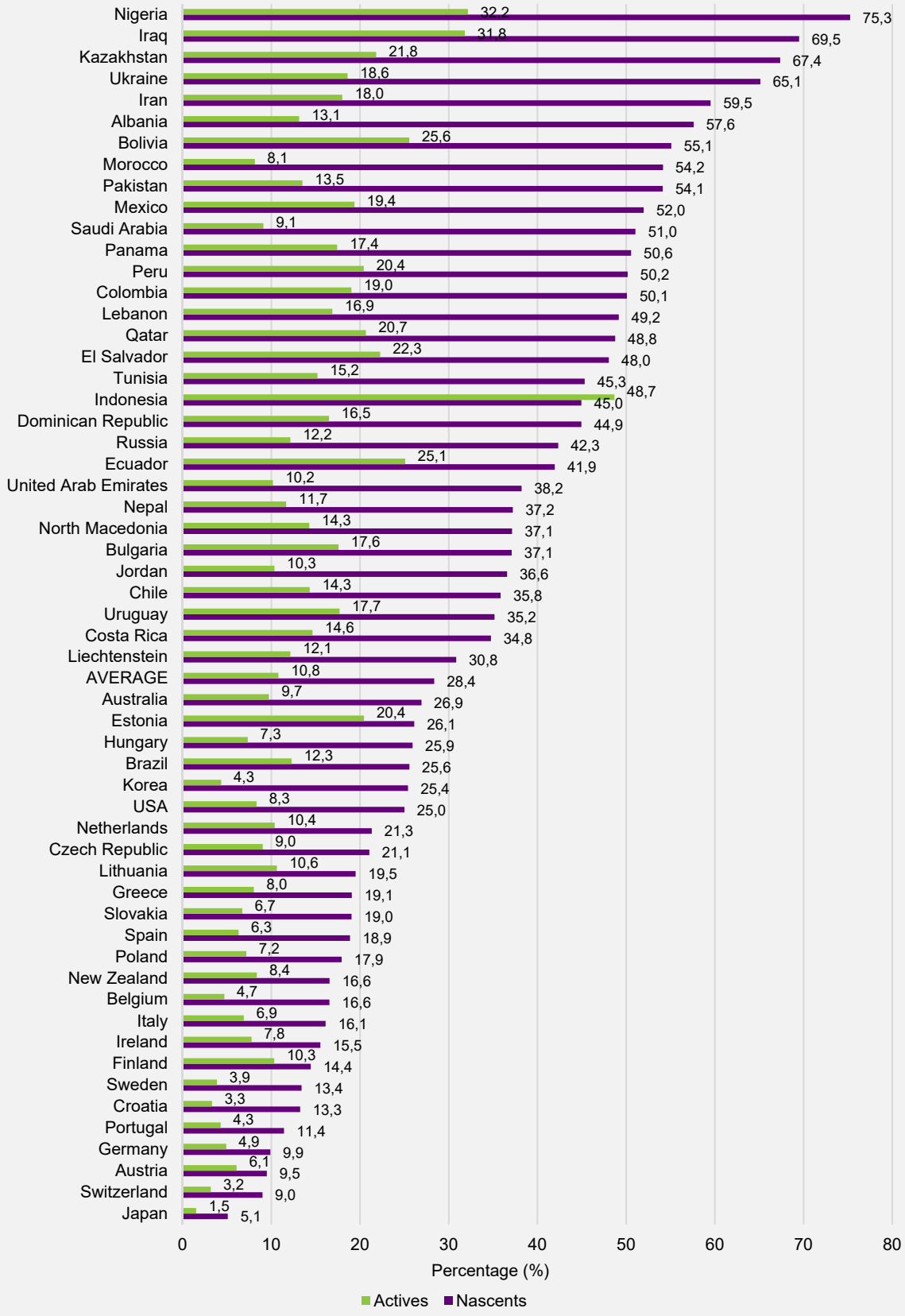
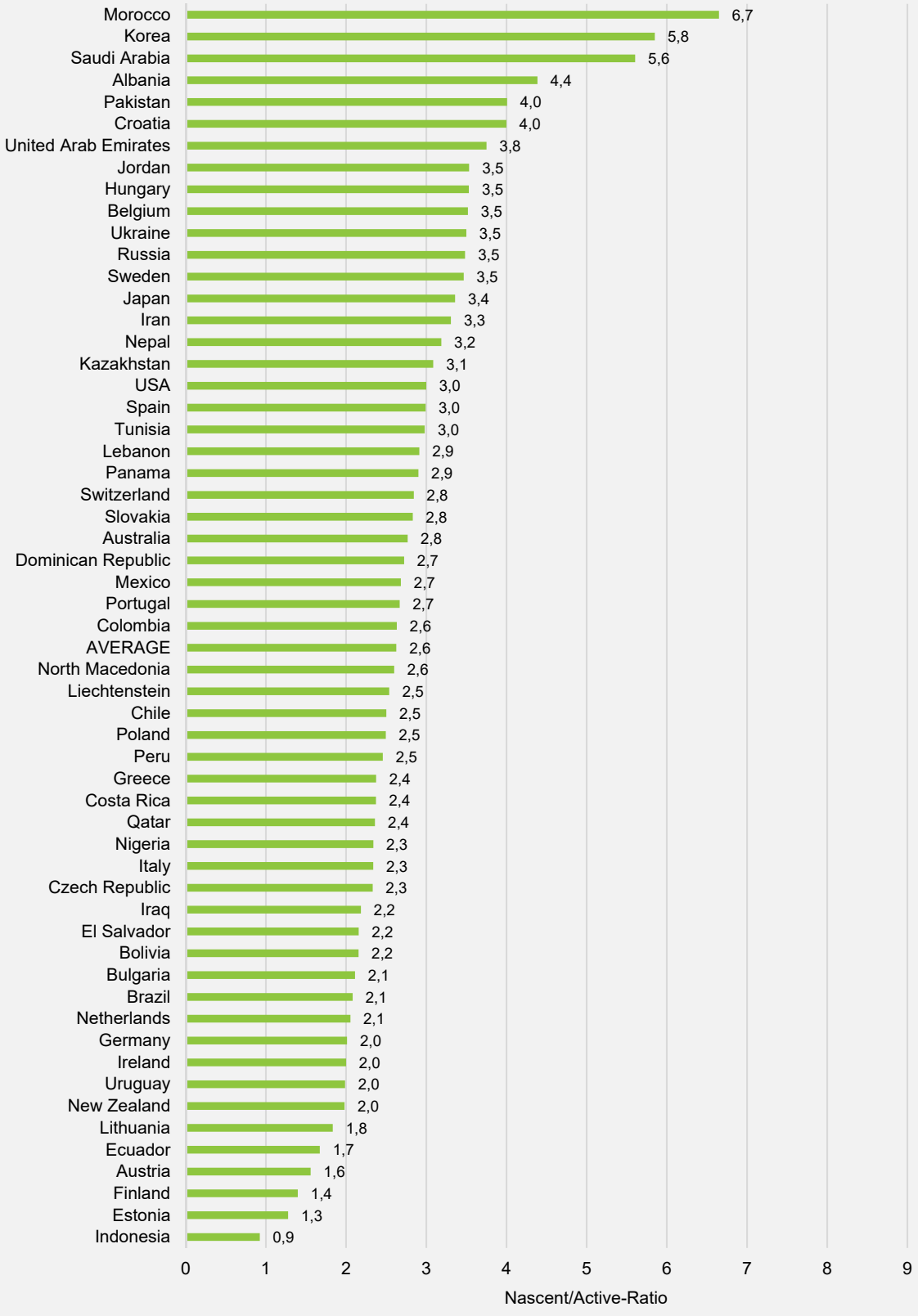


Figure 14. Proportion of nascent versus active entrepreneurs in each country (N=104'715)



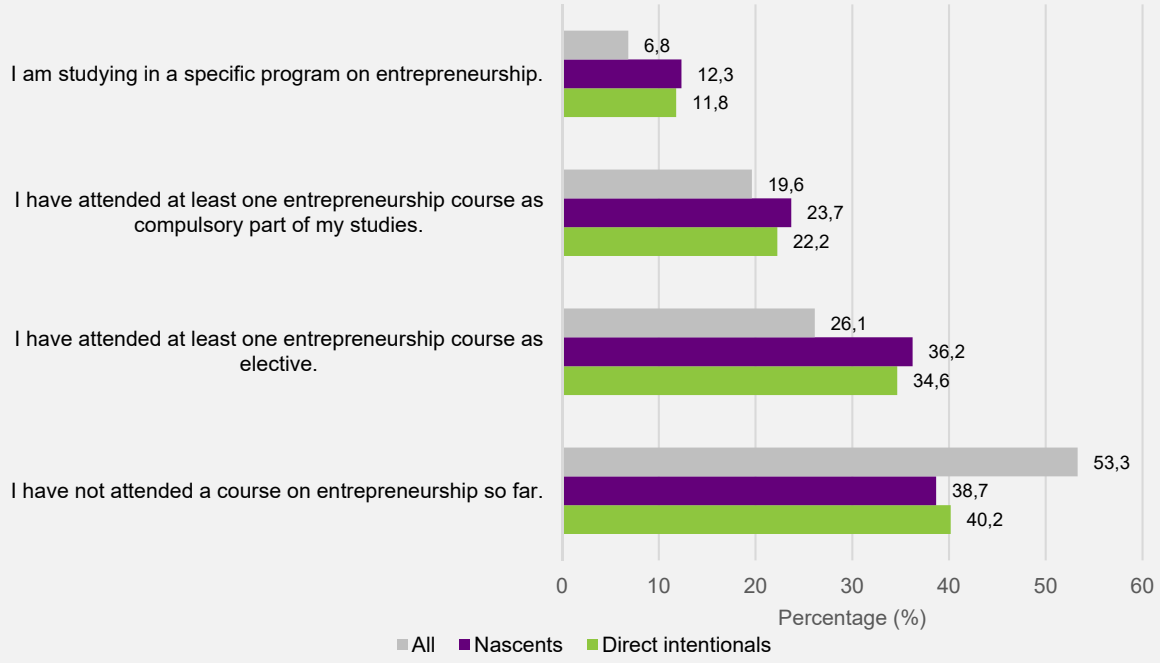
4. Student Entrepreneurship: Influencing Factors

4.1 The University Context

We first examined the extent to which the students had received entrepreneurship education. As Table 15 shows, more than half of the students in our sample had not attended any entrepreneurship course so far. 26,1 percent have attended at least an elective course, and 19,6 percent have attended compulsory courses (multiple answers were possible).

These numbers differ when considering nascent entrepreneurs or students who intend to be entrepreneurs directly after studies, respectively. While we cannot exclude reverse causality, as entrepreneurial students may self-select themselves into entrepreneurship education, it seems that entrepreneurship education indeed has the desired effect as the shares of nascent and direct intentional entrepreneurs are consistently higher when entrepreneurship education has been attended.

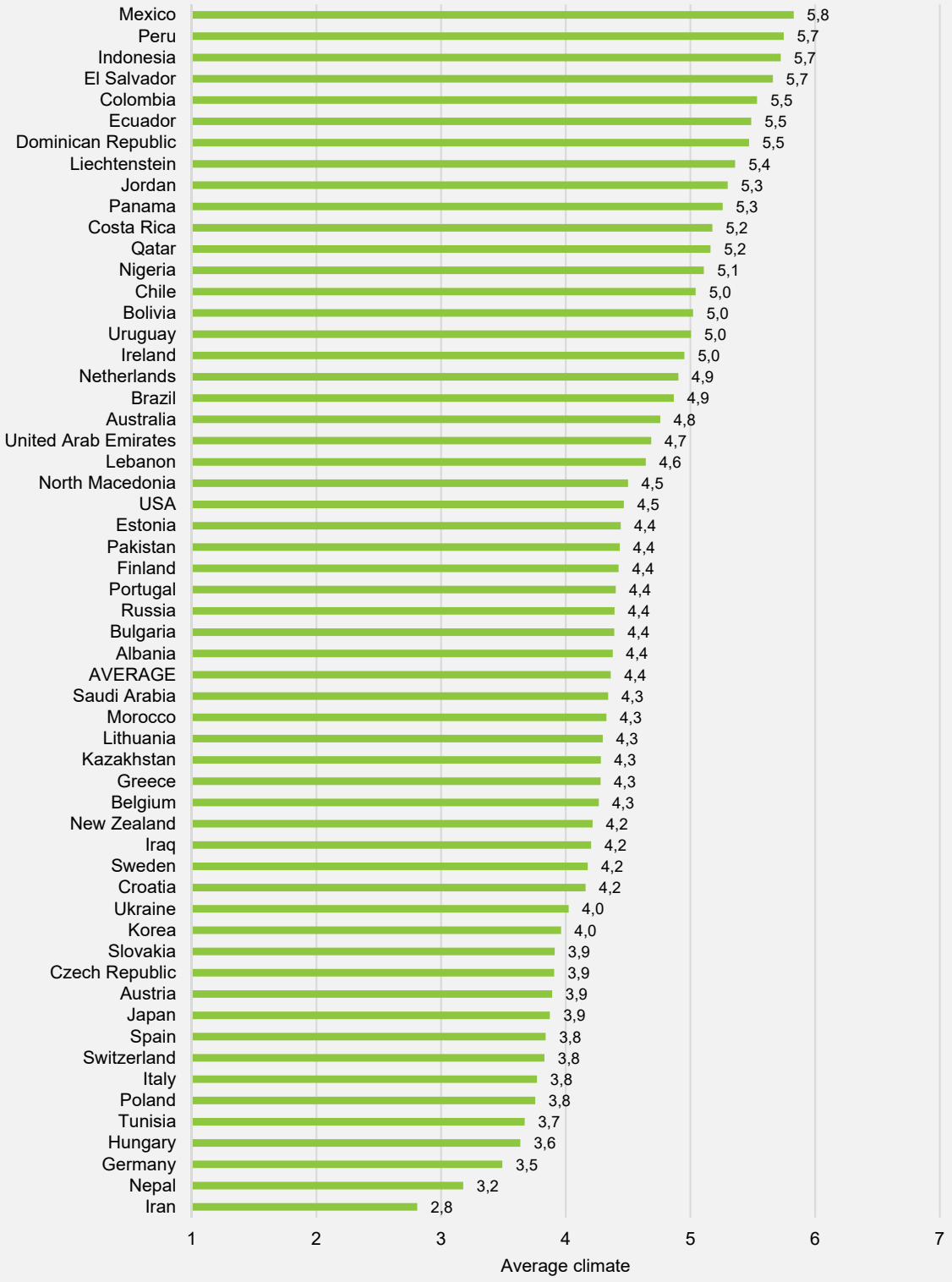
Figure 15. Attendance of entrepreneurship offerings among different student groups (N=267'366)



Very essential is also how entrepreneurial the students perceive the university environment to be. Keeping in mind that the numbers need to be interpreted with care, as these perceptions are affected by a multitude of (also sample-related) factors, we draw a global comparison. Interestingly, the global average is 4.4, which is slightly above the neutral point of our 1-7 scale.[4] Hence, there is considerable room for improvement on a general level. In addition, the differences between countries are considerable.

[4] Based on Franke and Lüthje (2004), we used three items: "the atmosphere at my university inspires me to develop ideas for new businesses"; "there is a favorable climate for becoming an entrepreneur at my university"; and "at my university, students are encouraged to engage in entrepreneurial activities". Students were asked to indicate the extent to which they agree with these statements (1=not at all, 7=very much).

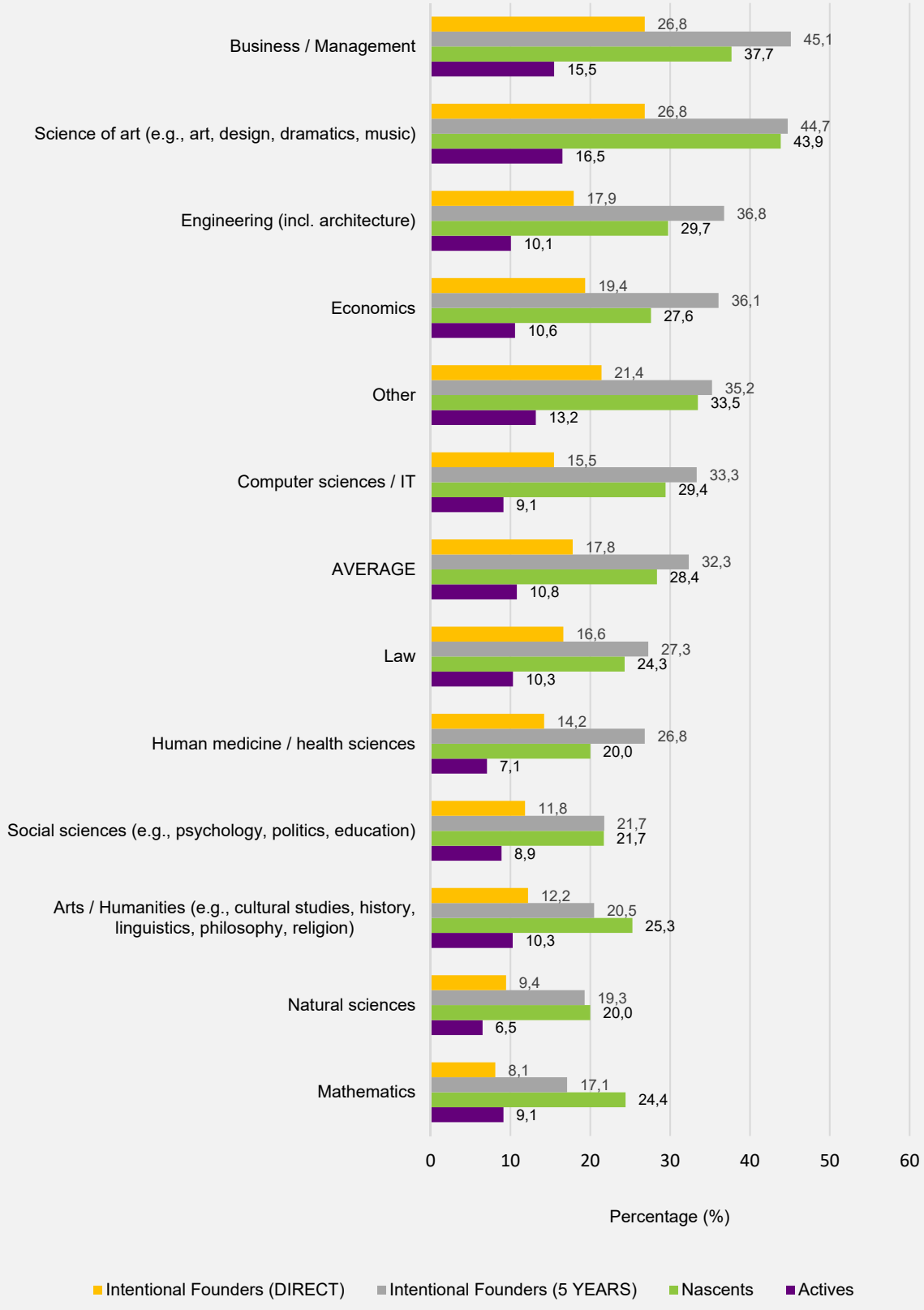
Figure 16. Average university entrepreneurial climate across countries (N=266'146)



4.2 Field of Study

Entrepreneurial intentions and activities of students strongly differ by field of study.

Figure 7. Entrepreneurial intentions and activities depending on field of study (N=267'244)



"Business and Management" and "Science of art" students have the strongest entrepreneurial intentions directly after studies (26,8 percent). 5 years after studies, entrepreneurial intentions are strongest among "Business and Management" students, closely followed by "Science of art" students which, in turn, exhibit the highest share of active and nascent entrepreneurs.

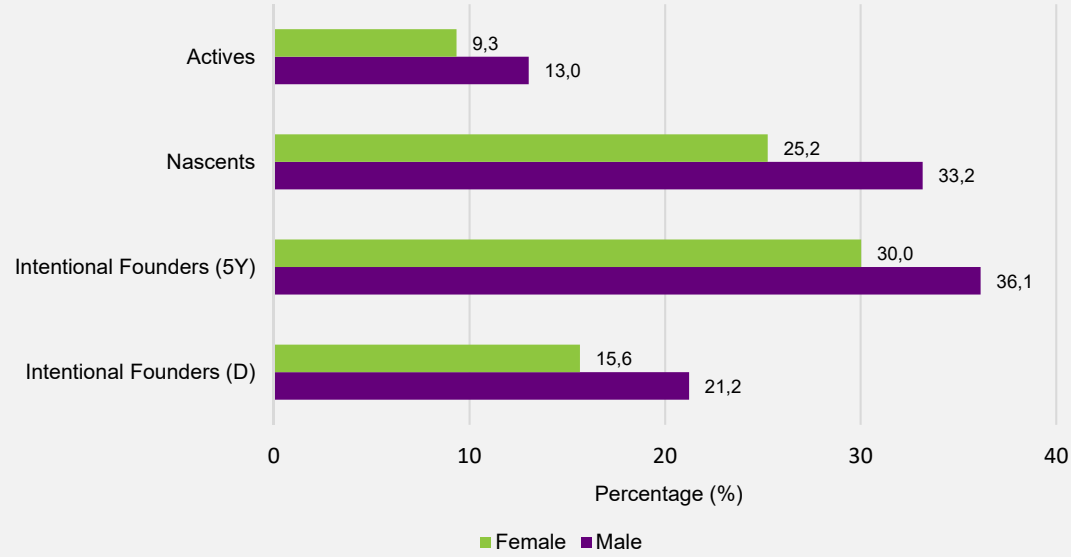
The strong entrepreneurial spirit among science of art students appears more surprising than that among business students. This might be due to the specific job profiles (e.g., working as an independent freelancer) and is in line with previous GUESSS reports (Sieger et al., 2019).

To avoid any bias related to study field in the different country samples, we only look at "Business and Management" students, which constitute the largest group in our sample (19,6 percent of all students), in Table 19. The share of intentional founders (5 years after studies) across all countries confirms the above pattern of higher shares in developing countries (and especially in Latin American countries) and lower shares in developed countries.

4.3 Gender

We clearly confirm the gender gap already found in previous editions (Sieger et al., 2019): the shares of active, nascent, and intentional entrepreneurs (both directly and 5 years after studies) are consistently smaller among females than among males.[5]

Figure 18. Gender differences among intentional, nascent, and active entrepreneurs (N=266'943)



We also examined the gender gap among active entrepreneurs in our 58 countries, meaning the difference in absolute percent between the share of active entrepreneurs among males and females, respectively. As shown in Table 20, the gender gap significantly varies across countries. A few countries even exhibit a "negative gender gap", meaning that the share of active entrepreneurs among females is higher than among males. The specific reasons clearly deserve future research attention.

[5] We are aware that more than two types of gender might exist; still, we focused on comparing males and females.

Figure 19. Intentional founders (B&M Students) 5 years after studies across countries (N=52'292)

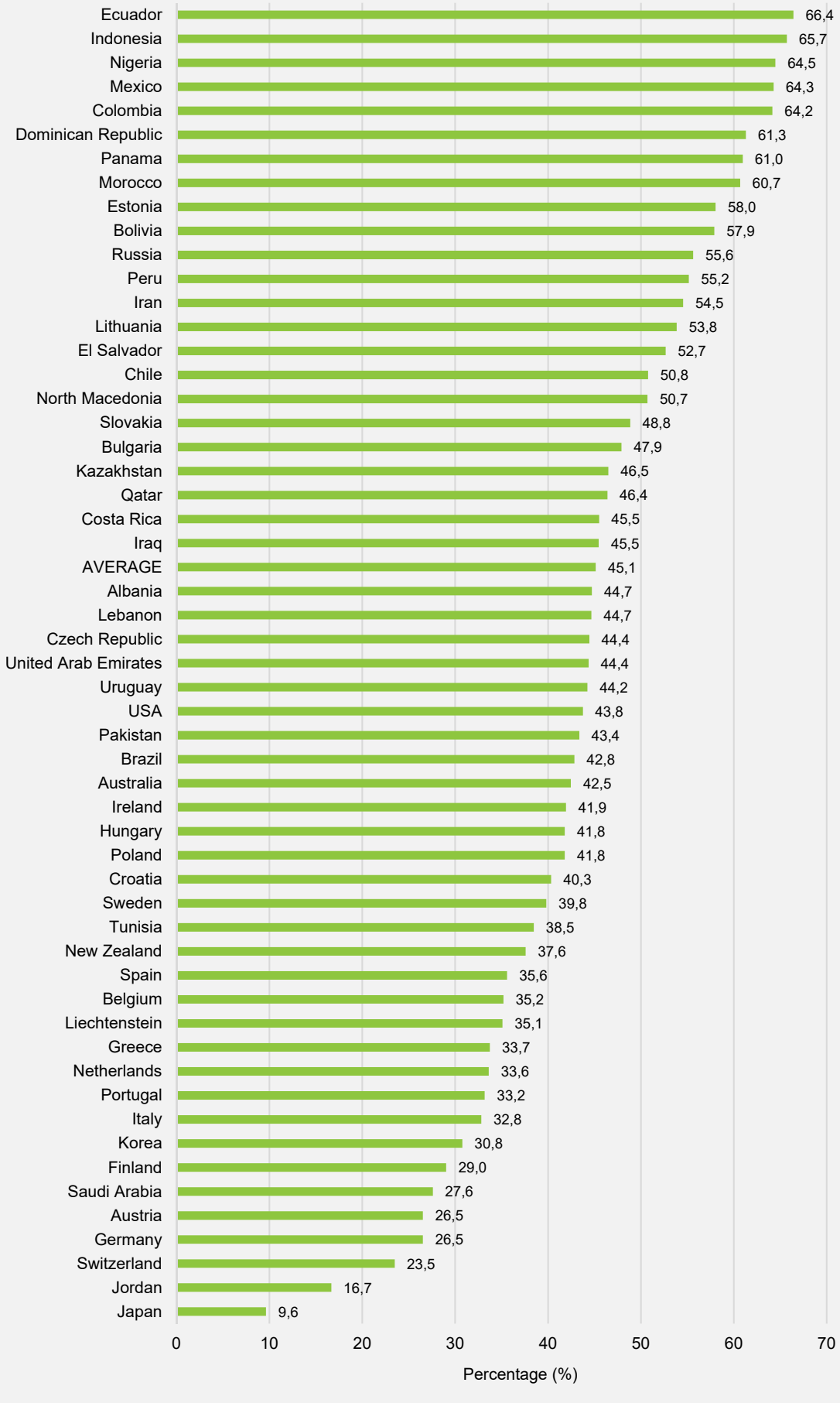
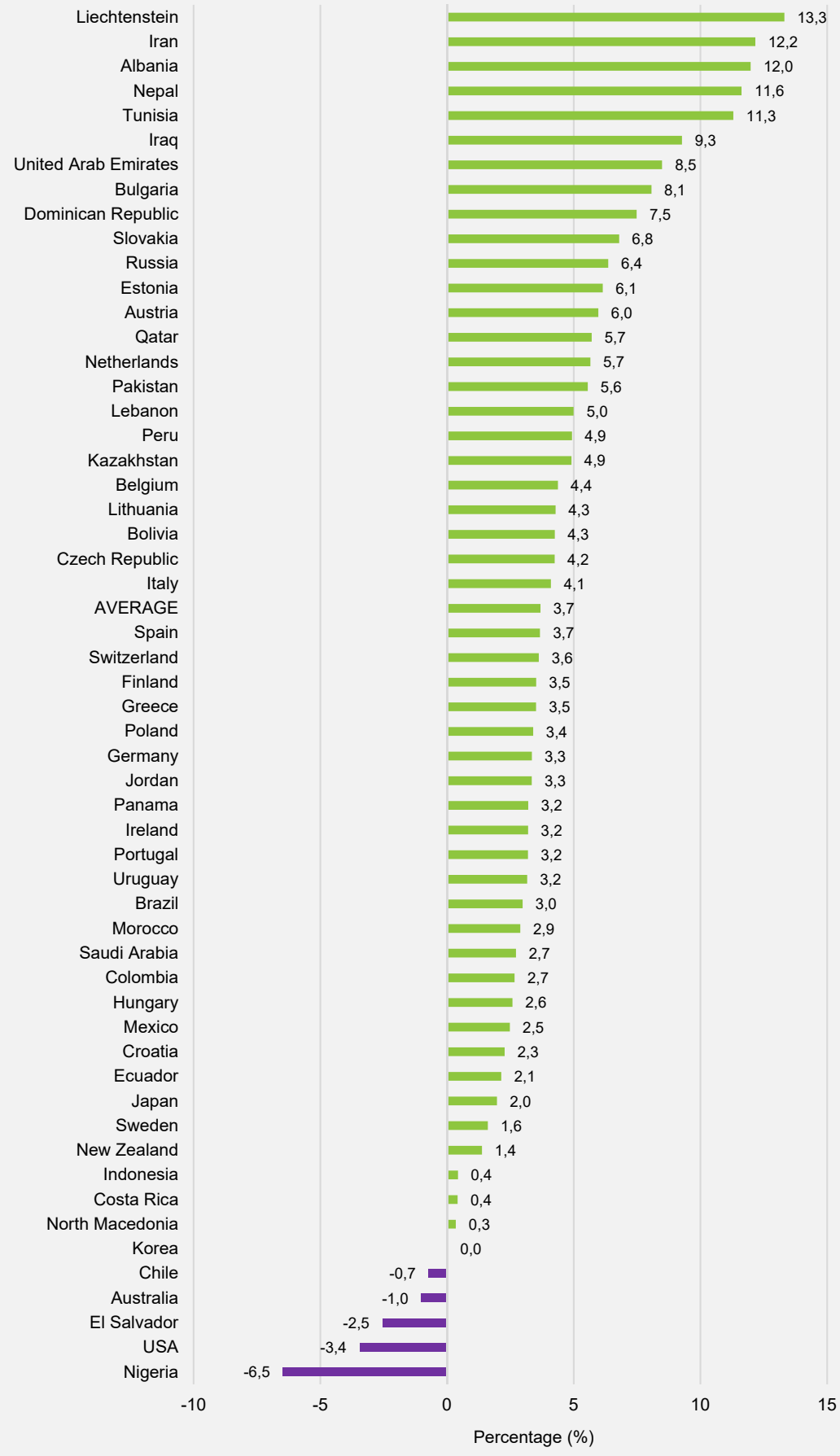


Figure 20. Gender differences among active entrepreneurs across countries (N=266'943)



5. The Impact of the COVID-19 Pandemic

Likely the most central topic since the last GUESSS edition, both in the context of entrepreneurship and in general, has been the COVID-19 pandemic.

How has it impacted student entrepreneurship? Above, we have seen that students' entrepreneurial intentions in 2021 are comparable to those in previous GUESSS editions. This signals that entrepreneurial intentions have, bottom line, not been systematically or significantly affected by the pandemic.

In addition, we asked the nascent entrepreneurs whether they plan to create their business largely because of the implications of the COVID-19 pandemic; 22,1 percent said yes. Here, we observe considerable differences between countries (see Table 21).

In a few countries, more than 40 percent of the nascent entrepreneurs indicate that the pandemic has induced them to be in the founding process; except for Japan, these can all be regarded as developing countries. In several other countries, the corresponding share is below 10 percent. Clearly, more research into this pattern would be valuable.

Among active entrepreneurs, and very interestingly, the share of "COVID entrepreneurs" is much higher: 33,7 percent indicate that they have created their business largely because of the pandemic. In several countries, mostly developing and often Latin American countries, the share is between 40 and up to almost 60 percent (see Table 22). This hints to the crucial relevance of "necessity entrepreneurship" in these countries (Wennekers, van Stel, Thurik & Reynolds, 2005). In other countries, in turn, the share is clearly below 10 percent.

Figure 21. Share of nascent "COVID entrepreneurs" (N=52'194)

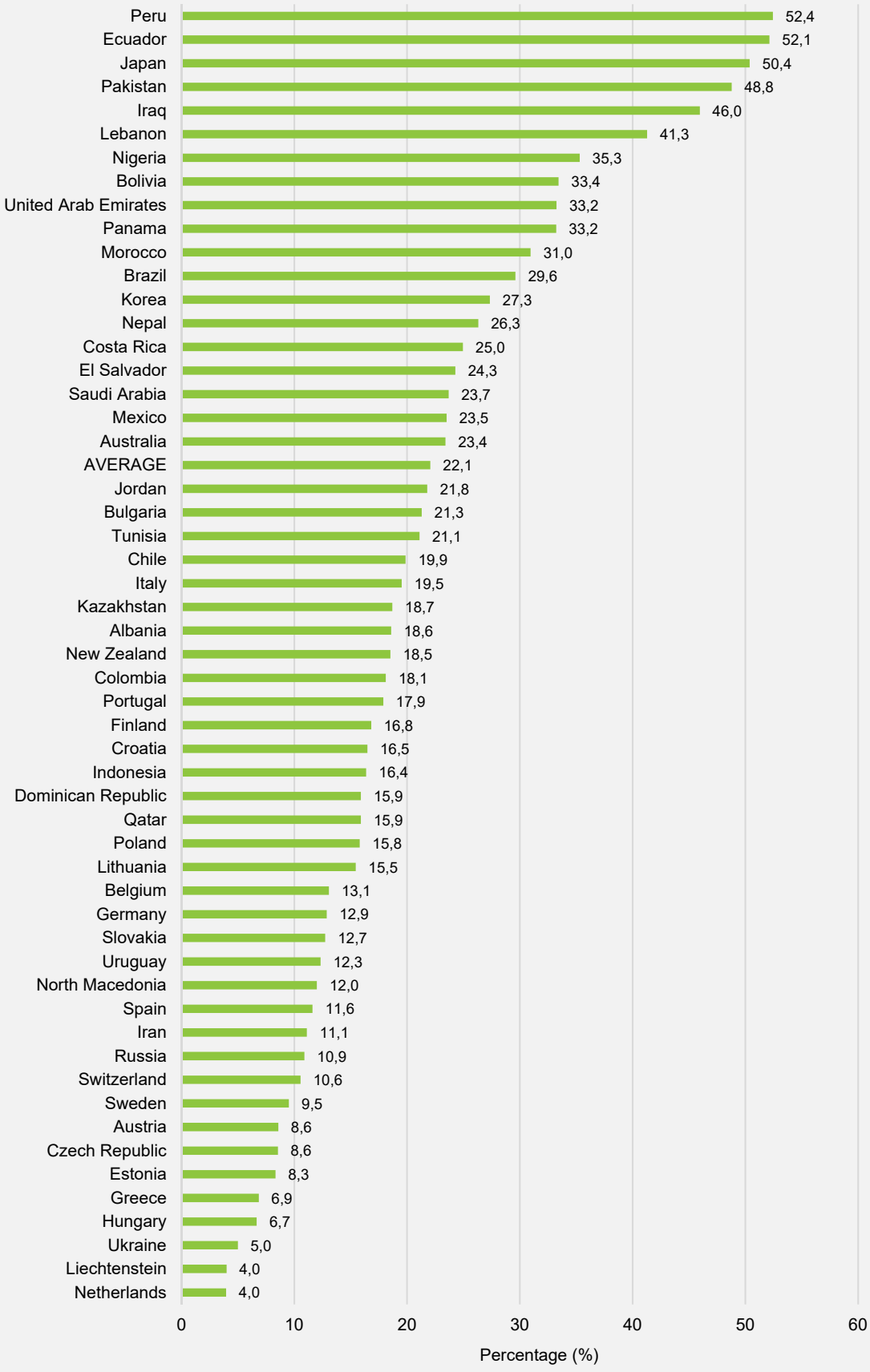
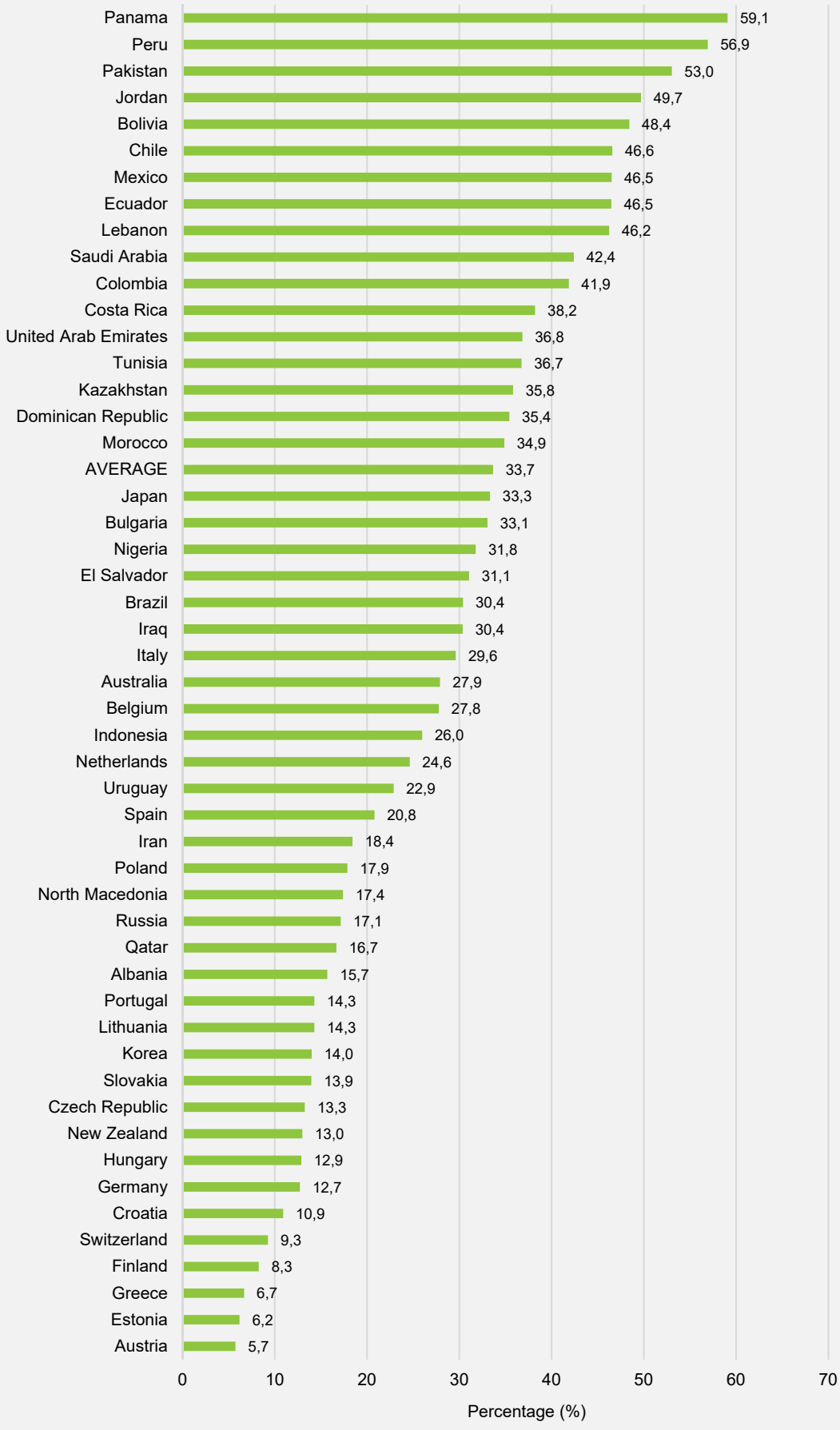


Figure 22. Share of active "COVID entrepreneurs" (N=27'496)



6. Selected Recommendations

Students should…

- Consider becoming an entrepreneur in whatever form (i.e., as a classic founder or successor in the parents' or in a different firm) as a potential career path, for instance because active entrepreneurs seem rather happy with their new venture's performance.
- Carefully consider when to create a new venture. Doing it right after studies has certain advantages, like less opportunity costs; but doing it later has advantages as well (as human and social capital can be built up when following the "first employee, then entrepreneur" logic).
- Be aware that being an entrepreneur "does not have to be forever"; changing between an entrepreneurial and non-entrepreneurial career path over one's career is possible; the same is true for relocating across countries.
- Be aware that the university normally offers different forms of support, advice, and the opportunity to meet potential co-founders.

Universities and public institutions should…

- Further improve and expand entrepreneurship education offerings and seek to create an entrepreneurial atmosphere.
- See the COVID-19 pandemic as a potential trigger for entrepreneurship; even though entrepreneurial intentions do not seem to have been affected, an effect regarding entrepreneurial activities is clearly visible.
- Be aware that entrepreneurship exists since centuries and has thus to be seen also in a general long-term context.
- Seek to provide an objective view on what it means to become an entrepreneur, with all the advantages and disadvantages. Anyone can start a business, but creating a successful business is something different.
- Actively promote entrepreneurial ecosystems with both public and private players.
- Be aware of the gender gap in entrepreneurship and systematically promote female entrepreneurs.

Entrepreneurship scholars should…

- Further strengthen their efforts when investigating the determinants and outcomes of student entrepreneurship in general as well as the underlying mechanisms.
- Consider the unique implications of the COVID-19 pandemic, but still keep investigating non-COVID-19-related topics.
- Contextualize their research by looking at institutional, cultural, and economic boundary conditions.
- Go for non-traditional topics that also look at the potential downsides of becoming an entrepreneur.

7. Further Information

7.1 The Sample

79 percent of the students in our sample are undergraduate (bachelor-level) students. 13 percent study on the graduate (master) level, 2,8 percent are PhD students, and the remaining ones are for instance MBA students. Regarding the field of study, “Business and management” students constitute almost one fifth of our whole sample (19,6 percent).

The majority of students (59,2 percent) are between 18 and 23 years old, and 60,3 percent are female. The completed respondents are distributed across countries as shown in Table 1.

Table 1. Countries and completed responses.

#	Country	Responses	Valid percent	#	Country	Responses	Valid percent
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	Netherlands (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)	3’596	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	60	0,02
29	Kazakhstan (KAZ)	2’791	1,04	58	Uruguay (URY)	1’843	0,69
					Total	**267’366**	**100,00**

7.2 The 2021 GUESSS Country Team Leaders

Table 2. List of countries and team leaders (part 1)

#	Country	Team Leader(s)	University
1	Albania (ALB)	Prof. Ermira Qosja	European University of Tirana
2	Australia (AUS)	Dr. Louis Geneste	Curtin University
3	Austria (AUT)	Prof. Alfred Gutschelhofer	University of Graz
4	Belgium (BEL)	Prof. Johanna Vanderstraeten / Dr. Frédéric Ooms	University of Antwerp / HEC Liège
5	Bolivia (BOL)	Prof. Rafael Velasquez Ramirez	NUR University
6	Brazil (BRA)	Prof. Edmilson Lima	UNINOVE - Universidade Nove de Julho
7	Bulgaria (BUL)	Dr. Juliana Hadjitchoneva	New Bulgarian University
8	Chile (CHI)	Prof. Gianni Romaní	Universidad Católica del Norte
9	Colombia (COL)	Prof. Izaias Martins / Tatiana Lopez	Universidad EAFIT
10	Costa Rica (CRC)	Prof. Juan Carlos Leiva	Instituto Tecnológico de Costa Rica
11	Croatia (CRO)	Gabrijela Vidic / Borna Buljan	University of Zadar
12	Czech Republic (CZE)	Prof. Klara Antlova	Technical University of Liberec
13	Dominican Republic (DOM)	Prof. Guillermo van der Linde	Pontificia Universidad Católica Madre y Maestra
14	Ecuador (ECU)	Prof. Mariella Jácome Ortega	Universidad Católica de Cuenca
15	El Salvador (ESA)	Prof. Manuel Sifontes	Universidad Dr. José Matias Delgado
16	England (ENG)	Prof. Audley Genus	Kingston University London
17	Estonia (EST)	Prof. Susanne Durst / Velli Parts	Tallinn University of Technology
18	Finland (FIN)	Dr. Katja Lahikainen / Prof. Timo Pihkala	LUT University
19	Germany (GER)	Prof. Stephan Golla	Fulda University of Applied Sciences
20	Greece (GRE)	Prof. Katerina Sarri	University of Macedonia
21	Hungary (HUN)	Dr. Andrea S. Gubik / Dr. Szilveszter Farkas	University of Mikolc / Budapest Business School
22	Indonesia (IND)	Dr. Eko Suhartanto	Universitas Prasetiya Mulya
23	Iran (IRI)	Ehsan Salari	Ferdowsi University of Mashhad
24	Iraq (IRQ)	Dr. Shivan Ahmed Mohammad / Dr. Rebean Al-Silefanee	Nawroz University
25	Ireland (IRL)	Dr. Roisin Lyons	Dublin City University
26	Italy (ITA)	Prof. Tommaso Minola / Dr. Davide Hahn	University of Bergamo
27	Japan (JAP)	Prof. Noriko Taji	Hosei University
28	Jordan (JOR)	Dr. Omar Shubailat / Dr. Aziz Madi	German Jordanian University
29	Kazakhstan (KAZ)	Prof. Gulzhanat Tayauova / Prof. Saltanat Tamenova	Turan University
30	Lebanon (LBN)	Lara Al Arab	Lebanese University
31	Liechtenstein (LIE)	Prof. Marco Furtner	University of Liechtenstein
32	Lithuania (LTU)	Dr. Irina Liubertė	ISM University of Management and Economics
33	Mexico (MEX)	Prof. José Ernesto Amorós	EGADE Business School
34	Morocco (MAR)	Dr. Jose M. Sanchez / José M. Biedma	University of Cadiz
35	Nepal (NEP)	Samundra Paudel	Pokhara University
36	Netherlands (NED)	Dr. Rainer Harms / Prof. Petra de Weerd-Nederhof	University of Twente
37	New Zealand (NZL)	Prof. Rod McNaughton	University of Auckland
38	Nigeria (NGR)	Prof. Isaac Oluwajoba Abereijo	Obafemi Awolowo University
39	North Macedonia (MKD)	Dr. Ana Tomovska Misoska	University American College Skopje
40	Norway (NOR)	Prof. Marina Solesvik	Western Norway University of Applied Sciences
41	Pakistan (PAK)	Dr. Altaf Hussain Samo	Sukkur IBA University
42	Panama (PAN)	Dr. María de los Ángeles Frende Vega / Omaris Vergara de Henriquez	Universidad de Panama
43	Peru (PER)	Prof. Jaime Serida / Jessica Alzamora / Carlos Guerrero	Universidad ESAN
44	Poland (POL)	Prof. Joanna Kosmaczewska	Poznan University of Life Sciences
45	Portugal (POR)	Prof. Rui Quaresma	University of Évora
46	Qatar (QAT)	Dr. Allan Villegas-Mateos / Dr. Pablo Martin de Holan	HEC Paris in Qatar
47	Republic of Korea (KOR)	Yeong Soo Kim	Korea Entrepreneurship Foundation
48	Russia (RUS)	Prof. Galina Shirokova	HSE University
49	Saudi Arabia (KSA)	Dr. Ghadah Alarifi	Princess Nourah bint Abdulrahman University
50	Slovakia (SVK)	Prof. Marian Holienka	Comenius University in Bratislava

Table continued on the next page.

Table 2. List of countries and team leaders (part 2)

#	Country	Team Leader(s)	University
51	Spain (ESP)	Prof. José Ruiz Navarro / Dr. José M. Sanchez	University of Cádiz
52	Sweden (SWE)	Prof. Massimo Baù / Dr. Johan Karlsson	Jönköping International Business School
53	Switzerland (SUI)	Prof. Philipp Sieger / Prof. Rico Baldegger	Universities of Bern & St.Gallen / HEG Fribourg
54	Tunisia (TUN)	Siwar Youssef / Dr. Henda El Gharbi	Corvinus University of Budapest / University of Sousse
55	Ukraine (UKR)	Prof. Marina Solesvik	Western Norway University of Applied Sciences (NOR)
56	United Arab Emirates (UAE)	Prof. Rodrigo Basco	American University of Sharjah
57	United States of America (USA)	Prof. Isabel Botero	University of Louisville
58	Uruguay (URY)	Dr. Catherine Krauss-Delorme / DEA Adriana Bonomo-Odizzio	Universidad Católica del Uruguay

7.3 The GUESSS Project

GUESSS (Global University Entrepreneurial Spirit Students´ Survey) has been founded at the Swiss Institute of Small Business and Entrepreneurship (KMU-HSG) in 2003.

Since 2016, GUESSS is jointly organized by the University of St.Gallen (KMU-HSG) and the University of Bern (Switzerland, IMU-U). The GUESSS CEO is Prof. Dr. Philipp Sieger (University of Bern). The supervisory board consists of Prof. Urs Fueglistaller, Prof. Thomas Zellweger, Prof. Isabella Hatak (all University of St.Gallen), and Prof. Norris Krueger.

GUESSS is one of the largest entrepreneurship research projects in the world. With every data collection wave, GUESSS has grown and has become more globally.

For every data collection wave, the GUESSS core team develops a comprehensive online survey that meets the highest academic standards. The link to the survey is then sent out to the country delegates who forward the survey invitation to their own students and to the national university partners (who then forward it to their respective students).

GUESSS data have been used for numerous studies, reports, practitioner-oriented articles, and academic publications (e.g., in renowned journals such as RP, JBV, ETP, and SEJ).

For more information and regular updates about GUESSS, please visit http://www.guesssurvey.org or follow GUESSS on Research Gate (http://www.researchgate.net).

If you are interested in participating in the next GUESSS edition in 2023, please contact Prof. Dr. Philipp Sieger (philipp.sieger@imu.unibe.ch).

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