Entrepreneurial Impact of German Academic Institutions 2024

Munich Impact Study - Deep dive into startup and founder profiles

Citation: *Fiedler, M., Lemanczyk, P., Treffers, T., Welpe, I.M. (2024). Entrepreneurial Impact of German Academic Institutions 2024: Munich Impact Study – Deep dive into startup and founder profiles. Chair for Strategy and Organization (TUM). https://www.entrepreneurshipranking.com*

CSO Technical University of Munich

Executive summary: Entrepreneurial Impact of German Academic Institutions 2024

Objective

The aim of the Entrepreneurial Impact Study is to quantify, compare and analyze the entrepreneurial impact of German universities as part of their "third mission" (in addition to research and teaching), to provide guidance for university management, university policy makers, and founders. The 2024 Entrepreneurial Impact Study focusses on the impact of academic institutions on local ecosystems and over time and on founder profiles by academic institutions with analyses like prior experience, diversity, and differences between faculty and students.

Method

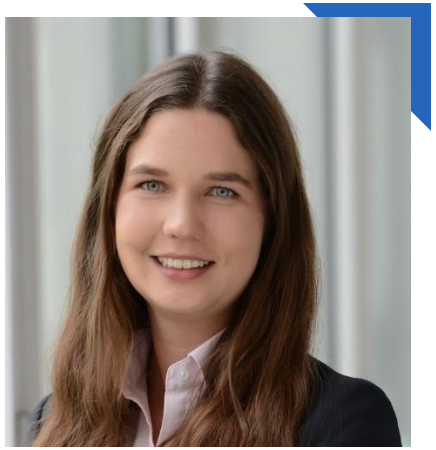
- The study uses data from the Handelsregister (StartupDetector) and the Dealroom platform as well as information from LinkedIn profiles and company websites to identify startups and assigns them to the respective universities. Startups founded between 2014 and 2022 were taken into account (n=33.515). The universities (n=296) are evaluated based on the total number of startups assigned to the universities. Moreover, DESTATIS database was used to obtain location and university information. Only startups that are founded until end of 2022 are included due incomplete data availability for the subsequent years.
- The startups were assigned to the universities based on the founders' degrees, their professional connections to the universities, mentions on the company websites and top 100 search engine results (Google). The number of assigned startups was set in relation to the university key figures (i.e., number of students, startup funding, and university budget) to create relative rankings and analysis. Additional data for founder profiles was drawn from an in-depth analysis of their LinkedIn accounts and data on gender and ethnicity of founders is added through requests of the genderize.io and nationalize.io API

Key insights

- Within top 10 university ranking by survival rate, 8 are universities of applied sciences (Fachhochschulen). No advantage of larger or smaller cities for startup survival becomes apparent.
- Large DAX corporates are predominant in founder’s previous experience, additionally strategy consulting firms and unicorn startups are found in the top 25 previous employer ranking.
- The academic institutions that lead the absolute rankings for separate years stay mostly constant over time, with TU Munich leading and TU Berlin following the ranking for all consecutive years. RWTH Aachen is moving up to a rank in the top 5 despite from not being part of the top 10 until 2016.
- Ethnically diverse founding teams make up a higher share (28%) than gender diverse founding teams (4%). More than 2/3 of founders in Germany are from Europe, but less than 50% of founding teams consist of team members that are only from western Europe.
- Berlin is #1 spot for startups to migrate towards, followed by Munich. For most location clusters ~30-40% of startups remain in the greater area of the university with >60% in Berlin and Munich. Migration patters have seen only small change since the COVID19-pandemic.

Team (alphabetical order)

Chair for Strategy and Organisation (tumcso.de)



Malin
Fiedler

malin.fiedler@tum.de

Philipp
Lemanczyk

philipp.lemanczyk@tum.de

Prof. Dr.
Theresa
Treffers

theresa.treffers@tum.de

Prof. Dr.
Isabell
Welpe

welpe@tum.de

Our Review Board

Science

Germany

- ESMT Berlin – Business as unusual: Stefan Wagner
- RWTH Aachen University: Malte Brettel
- Technische Universität Berlin: Jan Kratzer
- TUHH Hamburg University of Technology: Christian Lüthje
- Universität Hohenheim: Andreas Kuckertz
- Universität Passau: Carolin Häussler
- WHU Otto Beisheim School of Management: Nadine Kammerlander

Austria

- universität innsbruck: Johann Füller
- Johannes Kepler University Linz | JKU: Elisabeth Berger

Switzerland

- ETH zürich: Florian von Wangenheim

Industry

- HV Capital: Anna Ott
- Redstone Capital: Michael Brehm
- techstars_: Martin Schilling

Note: Review board sorted by university in alphabetical order; Image sources: University/ company websites

Contents

Impact of academic institutions and startup survival rate

Founder profiles by academic institutions

Methodology and Recap: 2023 Ranking of academic institutions

1. Startup survival rate
2. Economic impact of top 3 universities
3. Entrepreneurial impact of universities over time
4. Average time to startup after graduation
5. Previous industry experience
6. Founder diversity ranking
7. Founder migration ranking
8. Student vs. faculty founded startups

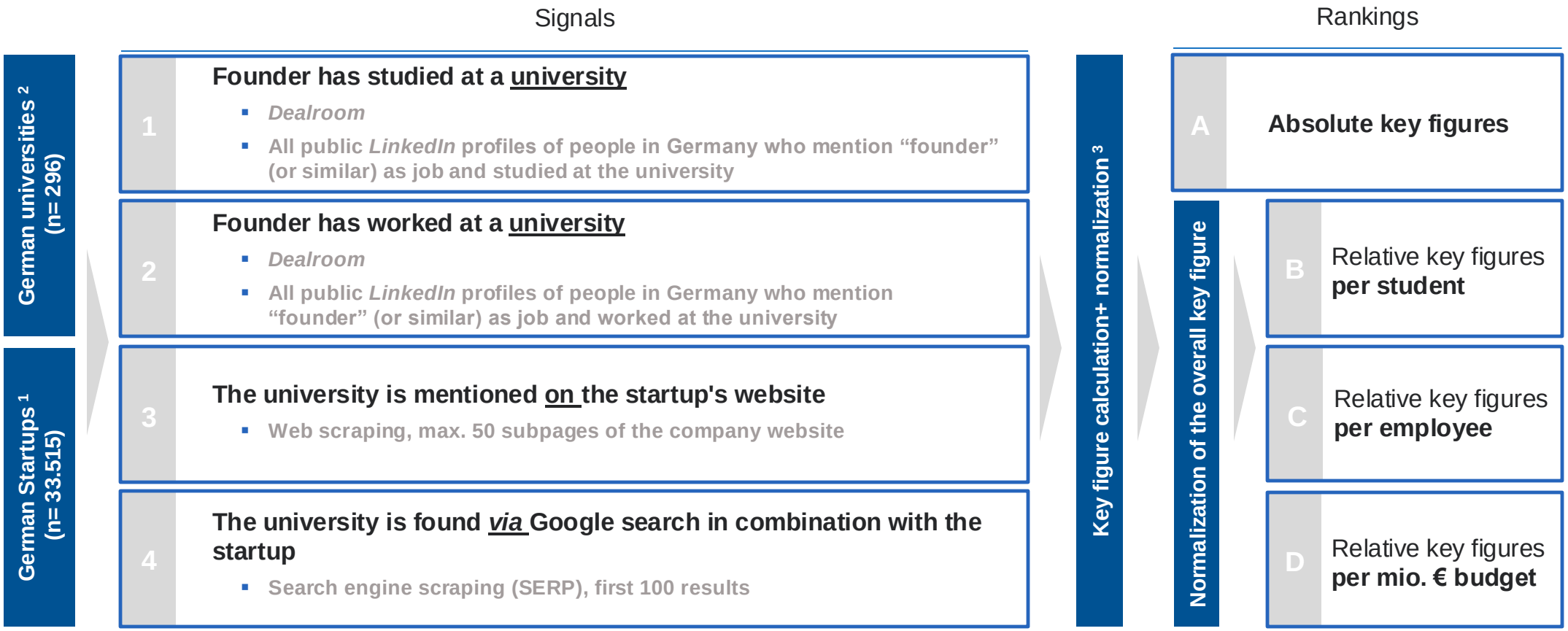
Methodology: Key definitions

	Definition	Example
Startup	▪ Company registered as “startup” at the German chamber of commerce (Handelskammer) ▪ Startups need to be “newly founded, innovative and growth-oriented”, they are max. 10 years old ▪ Companies are manually checked by the team of “startupdetector” if they are a start-up	▪ Start-up: Newly founded software / tech company ▪ Not a start-up: craft / handyman businesses, one-person company
(German) founder	▪ Person who studied or worked at a German academic institution and founded a startup in Germany	▪ Included in dataset: Person from the U.S. who did their master’s degree at a German university and started a company in Germany ▪ Not included in dataset: Person from Germany who studied in Germany but founded a company in the U.S.
Start-up survival	▪ Startups that have an “active” or “merged/ acquired” status in Jan 2024 based on the company’s commercial register entry (Handelsregister) ▪ Non-active commercial register status are either: “in liquidation” or “removed/ deleted”	▪ Startup A and B have been founded in 2017 and had the status “active” ▪ In Jan 2024, Startup A is still “active” (survived) while the status of Startup B is “in liquidation” (did not survive)

Data sources: *Startups: StartupDetector (as of January 2024, Dealroom (as of January 2024), LinkedIn (as of September 2022), Google Search (query September 2022), company websites (query September 2022), university* data: Federal Statistical Office (university year 2020/2021)

Methodology

The startups were assigned to German universities in a multi-stage, multi-data process.



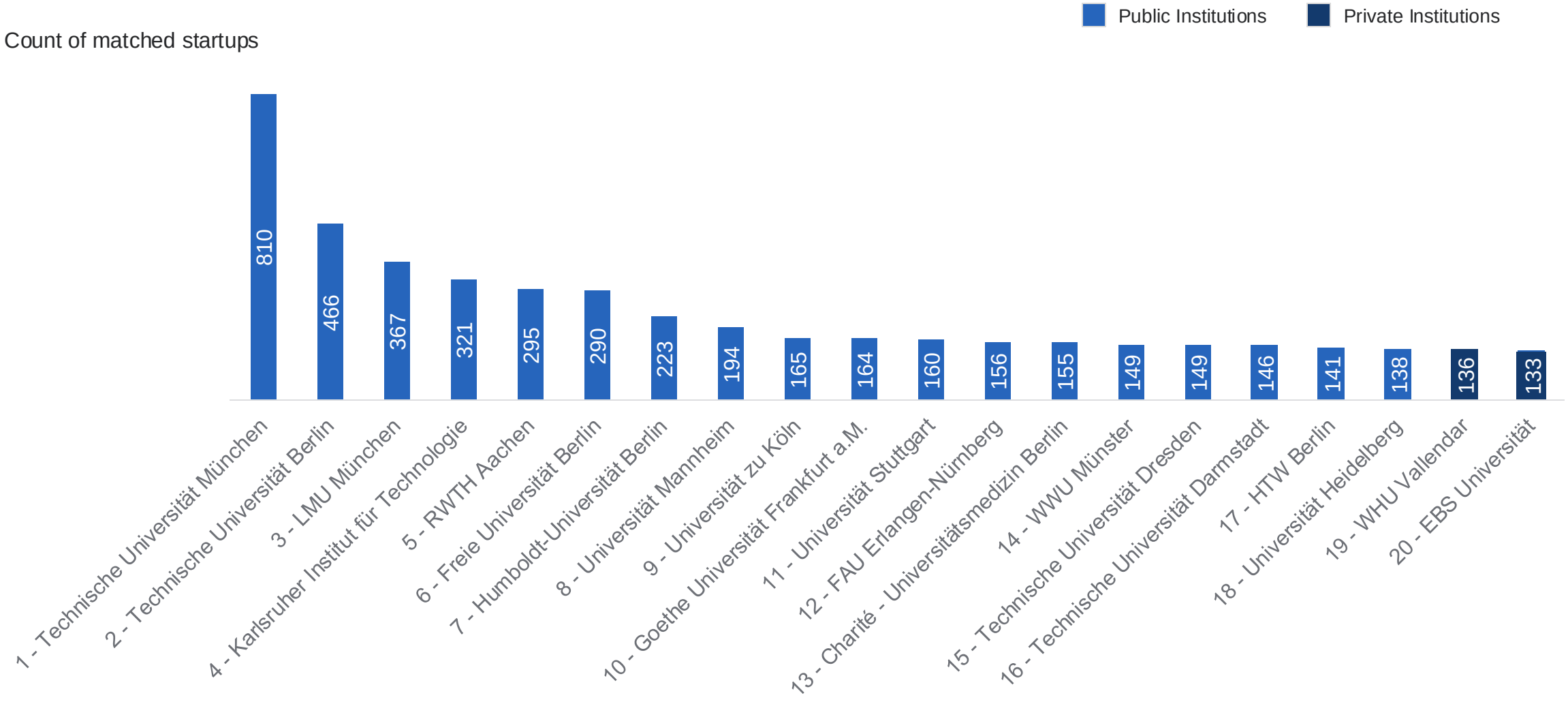
1 German companies founded between 2014 and 2022 were considered that (1) were classified as startups based on the commercial register (only up to and including 2022, based on data *from* startupdetector), or (2) are listed *as* startups in the Dealroom platform. A company was classified as a startup if it was newly founded, innovative and growth-oriented.

2 All German universities were taken into account based on data from the Federal Statistical Office (destatis), with the exception of purely theological universities and pure art colleges. University hospitals were excluded in terms of budget (with the exception of Charité, as this was considered a separate university in the data sources)

3 A score was calculated for each startup-university pair. A score of 0.67, for example, means that 67% of the startup was assigned to an institution (e.g. 2 out of 3 founders studied at the university). Only pairs above the threshold value of 0.20 were counted.

Data sources: *Startups: StartupDetector (as of January 2024, Dealroom (as of January 2024), LinkedIn (as of September 2022), Google Search (query September 2022), company websites (query September 2022), university* data: Federal Statistical Office (university year 2020/2021)

Recap 2023: Ranking of academic institutions by total number of startups from 2014 - 2021

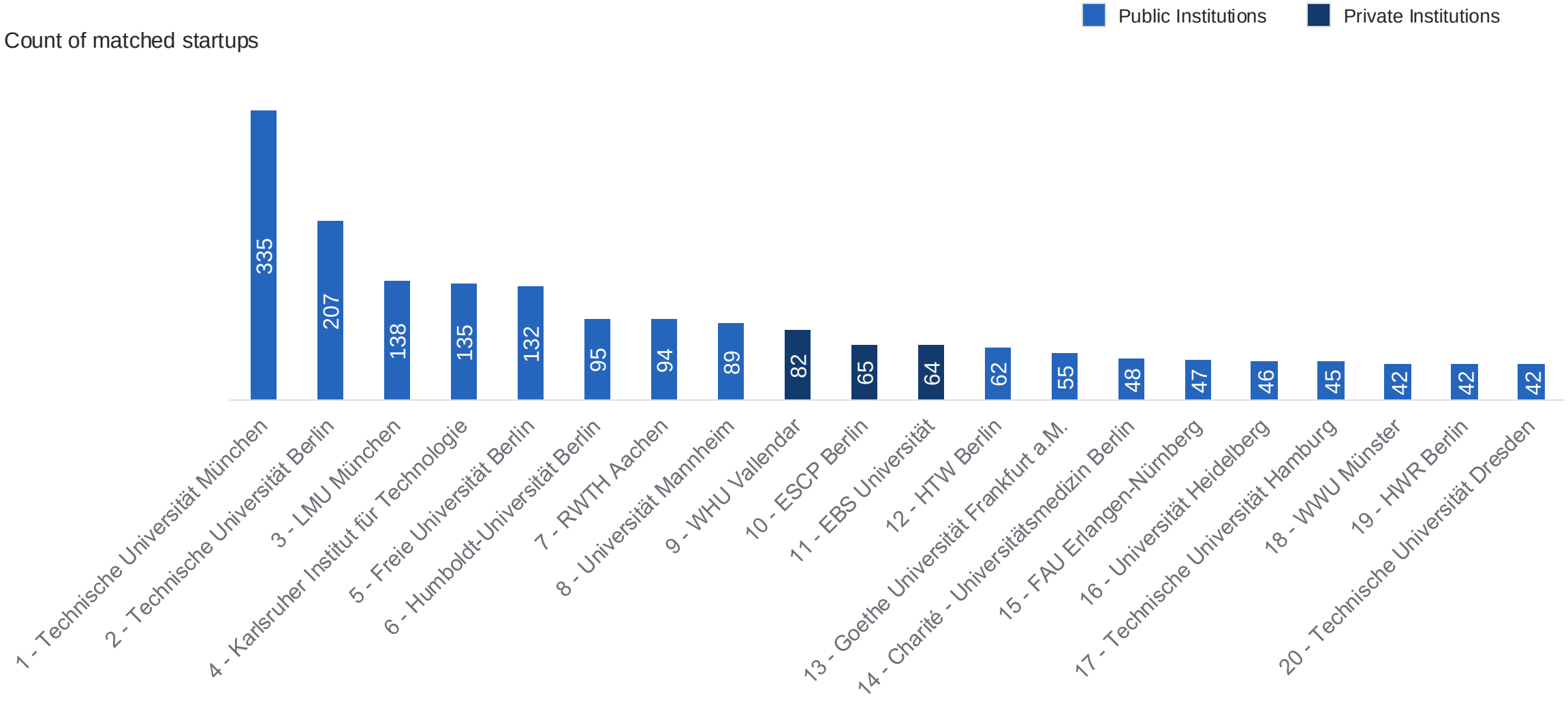


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Fiedler, M., Heidegger, L., Treffers, T., Welpe, I.M. (2023). *Entrepreneurship Performance Deutscher Hochschulen 2023*. Chair for Strategy and Organization (TUM). https://www.entrepreneurshipranking.com/german-entrepreneurship-ranking

Recap 2023: Ranking of academic institutions by total number of financed startups from 2014 - 2021

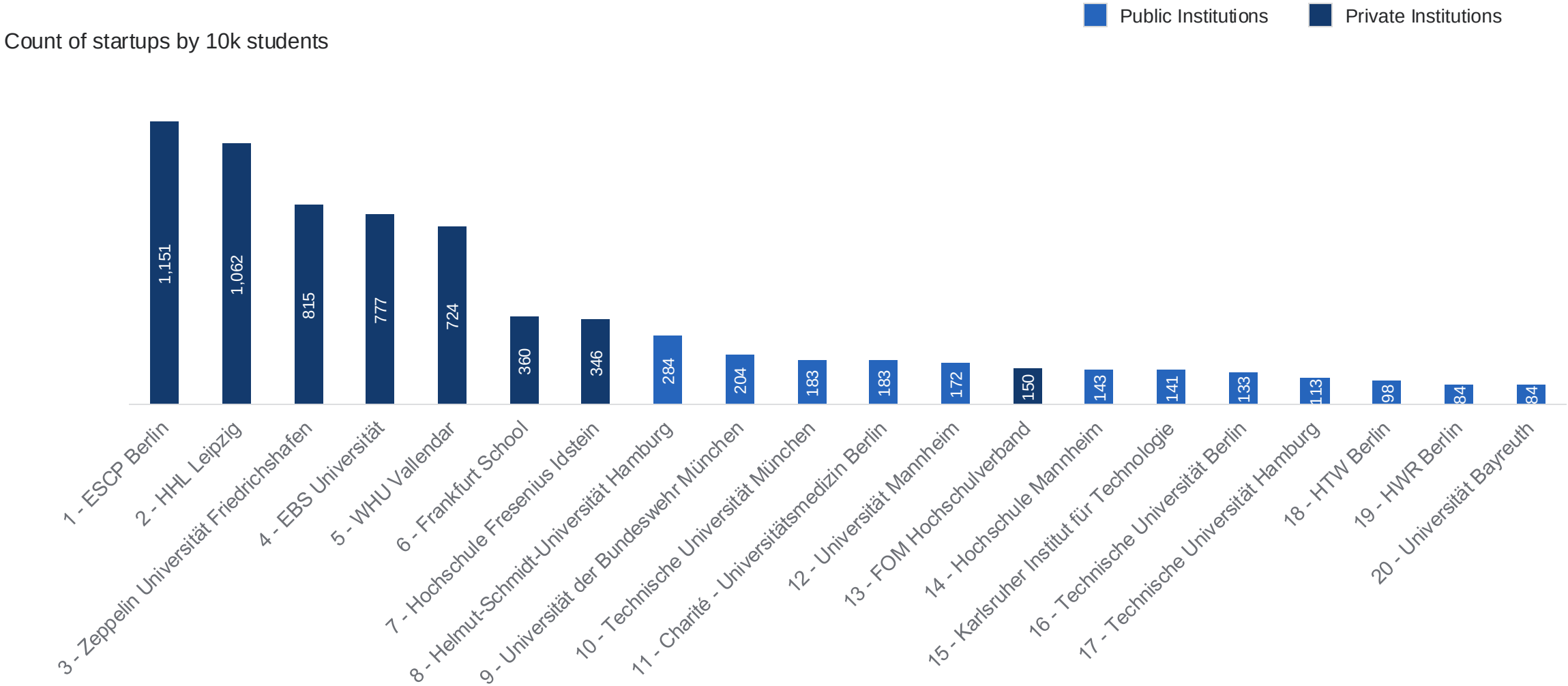


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Fiedler, M., Heidegger, L., Treffers, T., Welpe, I.M. (2023). *Entrepreneurship Performance Deutscher Hochschulen 2023*. Chair for Strategy and Organization (TUM). https://www.entrepreneurshipranking.com/german-entrepreneurship-ranking

Recap 2023: Ranking of academic institutions by relative number of startups per 10k students from 2014 - 2021



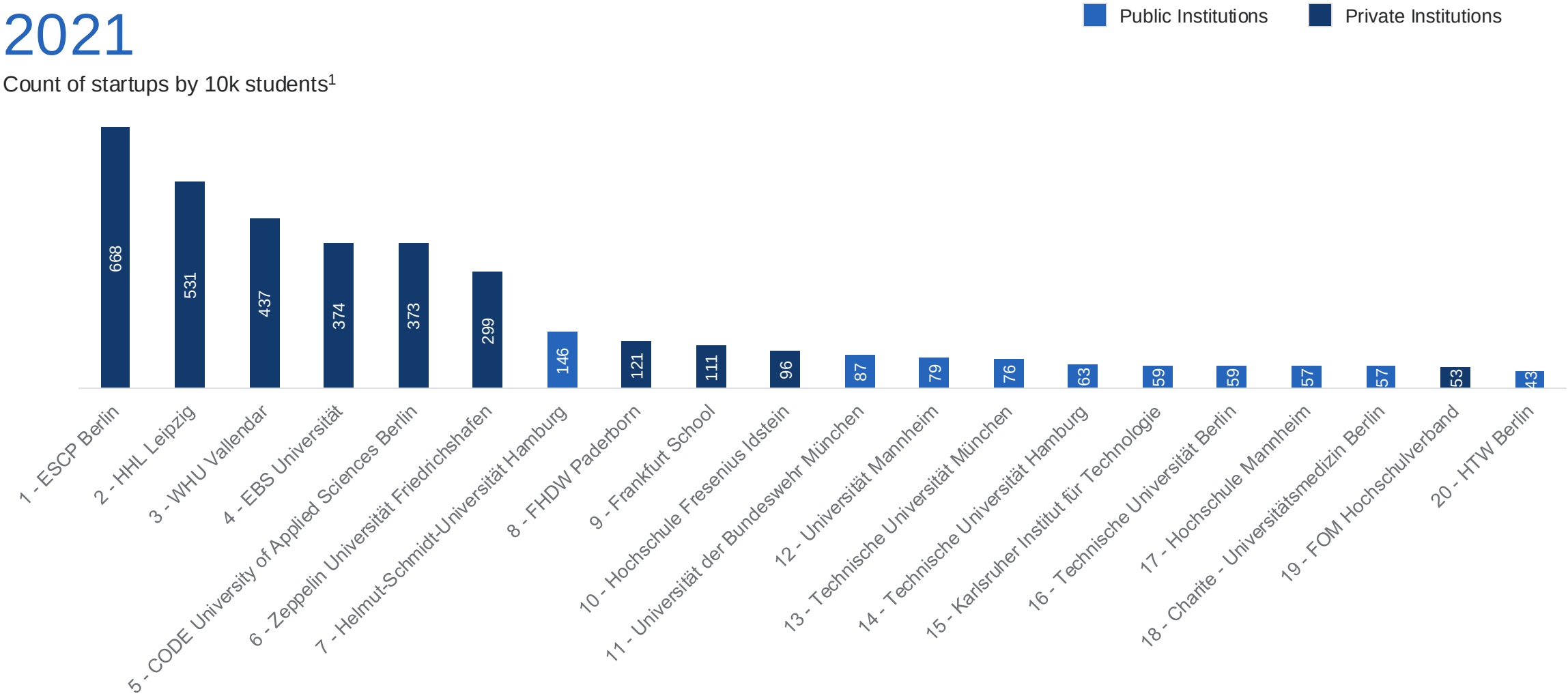
Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Fiedler, M., Heidegger, L., Treffers, T., Welpe, I.M. (2023). *Entrepreneurship Performance Deutscher Hochschulen 2023*. Chair for Strategy and Organization (TUM). https://www.entrepreneurshipranking.com/german-entrepreneurship-ranking

Recap 2023: Ranking of academic institutions by relative number of financed startups per 10k students from 2014 - 2021

Count of startups by 10k students[1]



1. Die hier gezeigt Anzahl Startups entspricht nicht der tatsächlichen Anzahl Startups, die an den jeweiligen Hochschulen gegründet wurden. Es handelt sich um eine Hochrechnung auf 10.000 Studierende

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Fiedler, M., Heidegger, L., Treffers, T., Welpe, I.M. (2023). *Entrepreneurship Performance Deutscher Hochschulen 2023*. Chair for Strategy and Organization (TUM). https://www.entrepreneurshipranking.com/german-entrepreneurship-ranking

Contents

1: Startup survival rate: Key Takeaways

- Within top 10 ranking by survival rate, 8 institutions are universities of applied sciences (Fachhochschulen).
- For funded startups, especially graduation from technical universities, universities with medicine focus, and management universities is associated with higher startup survival rates.
- No advantage of larger or smaller cities for startup survival becomes apparent in the ranking, suggesting limited influence of the location and infrastructure in the region of the academic institution on survival.
- Nevertheless, a very high survival rate may not necessarily be a positive sign, as it may also show that students from these universities may not be as encouraged to found a fast-growing company. Therefore, potentially only highly ambitious founders start a business.
- Drawing on the Survival-Growth Paradox, the ranking shows universities whose startups excel in maintaining operational stability while effectively managing the challenges of growth, reflecting a strong foundation for long-term success.

Image source: Pexels, 2024

1: Startup survival rate: Method and interpretation notes

Method:

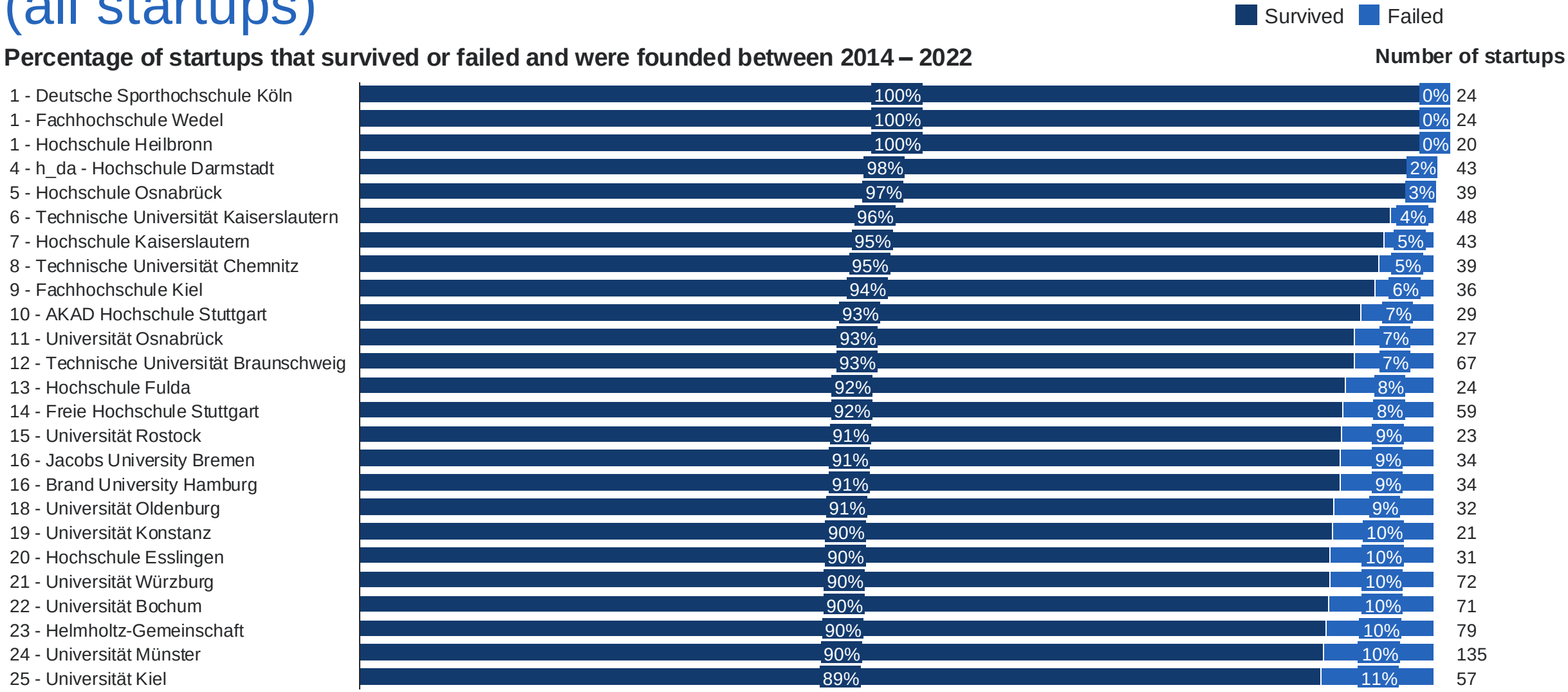
How did we calculate the average survival rate per academic institution?

- **Calculation Based on Handelsregister Status:** The survival rate is calculated by dividing the number of startups that are "Active" or "Merged/Acquired" by the total number of startups (including "In Liquidation" or "Removed/Deleted"). The data covers startups from 2014-2022, with status assessed as of January 2024. Startups are included regardless of how long they've been active or inactive.
- **Matching of Startups with Available Status Data and Universities:** The calculation only includes startups with confirmed status data. Startups that cannot be found or verified are excluded. The university rankings are aggregated by matching startups to their respective universities (see methodology).
- **Funded Startups Based on Dealroom Data:** Startups identified as funded based on Dealroom data are analyzed separately to determine their survival rate, focusing only on those with available funding information.

Notes and limitations for the interpretation of the results

- **Survival Rate and Startup Quality:** The calculated survival rate does not indicate the quality of the startups. Both unicorns and startups that are merely registered but generate little to no revenue can be marked as "active." This can distort the survival rate's effectiveness as an indicator of economic success.
- **Interpretation of Survival Rate:** A high startup survival rate might indicate successful ventures, but it could also suggest that only highly determined founders pursue startups. Additionally, environmental factors might deter potential founders from taking the risk, limiting the diversity and innovation within the startup ecosystem.
- **Data Limitations and Scope:** The analysis is based on a specific dataset covering startups from 2014-2022, with status verified as of January 2024. Any changes after this cutoff or incomplete datasets could affect the results, limiting the comparability across different periods or regions.

1: Ranking by average startup survival rate (all startups)



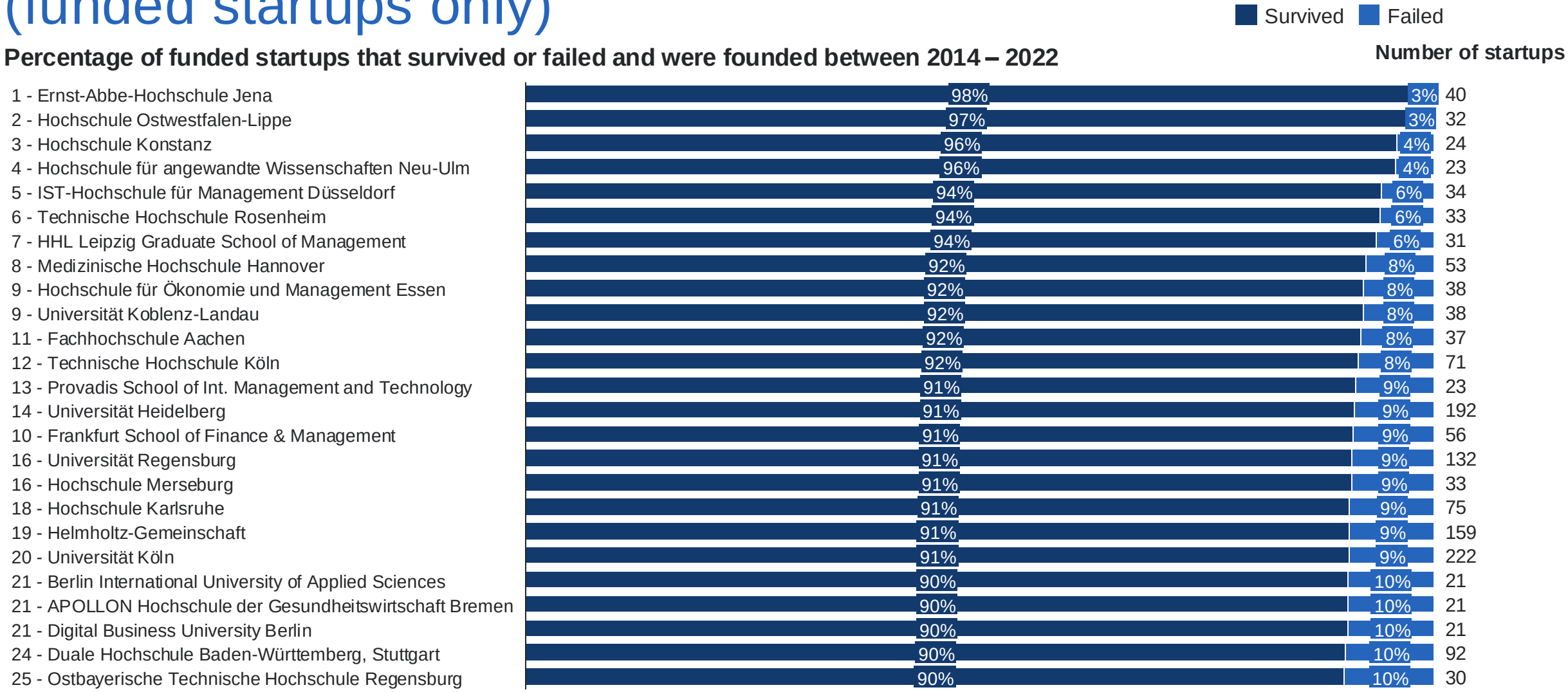
Only universities included in analysis with at least 20 startups for which company status data could be obtained. Company status is obtained from Handelsregister, incl. registrations and de-registrations

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

1: Ranking by average startup survival rate (funded startups only)

Percentage of funded startups that survived or failed and were founded between 2014 – 2022



Only universities included in analysis with at least 20 startups for which company status data could be obtained. Company status is obtained from Handelsregister, incl. registrations and de-registrations

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Contents

2: Economic impact of top 3 universities: Key Takeaways

- These analyses look at the impact of the 3 academic institutions with the highest total number of assigned startups from the 2023 ranking (TU Munich, LMU and TU Berlin).
- Academic institutions have a strong impact on their local ecosystems by fostering the emergence of student- or faculty-founded startups which create jobs and bring in additional tax revenue for the state.
- A high share of startups is focusing on areas that are highly relevant for future developments of our economy.
  - STEM-focused institutions like TU Munich or TU Berlin are able to produce a high share of high-tech companies (35% for both institutions).
  - A lower, while still notable, share of companies addresses sustainability with their products or services focusing on achieving the Sustainable Development Goals set by the United Nations.

Image source: Pexels, 2024

2: Entrepreneurial Impact of Technical University Munich

Former students and faculty[1] of TUM have founded **~1,300 startups**

Of which are:

16 companies unicorns

(Valuation >= 1 bn.$)

29 companies potential future unicorns

(Valuation 250 mn.$ - 1 bn.$)

~ 35% high-tech companies

(split via industry classification in Dealroom database)

~ 10% ESG impact companies

(split via focus on Sustainable Development Goals in Dealroom database)

These companies have:

~ 62,400 jobs created

(Estimate through company size)

→ **9.6** jobs per university staff[2]

~ 200 mn. € hypothetical tax revenue brought in

(Estimate through average income tax in Germany with assumption that 48% of additional jobs would not exist without startups (in line with model developed by Froehlich, 2023))

~ 12.1 bn. € total external financing

~ 1.5 bn € in 2023 in Germany

→ **18%** of total German VC investments in 2023

~ 86.3 bn. € total valuation in 2023

(Former) faculty[3] of TUM has filed **~1,400 patents**

1: All startups that are founded by former students and faculty of TUM are included – including international founders and companies
2: All positions at institution
3: Patents, that are filed by former and active faculty of TUM through TUM are included
Sources: *Dealroom database: all* startups that are founded until Nov. 2023 are included; PATSTAT database for patent data: all from 2014-2022 filed patents are included

2: Entrepreneurial Impact of Ludwig-Maximilians-University Munich

Former students and faculty[1] of LMU have founded **~750 startups**

Of which are:

15 companies unicorns

(Valuation >= 1 bn.$)

16 companies potential future unicorns

(Valuation 250 mn.$ - 1 bn.$)

~ 27% high-tech companies

(split via industry classification in Dealroom database)

~ 5% ESG impact companies

(split via focus on Sustainable Development Goals in Dealroom database)

These companies have:

~ 44,000 jobs created

(Estimate through company size)

→ **7.4** jobs per university staff[2]

~ 140 mn. € hypothetical tax revenue brought in

(Estimate through average income tax in Germany with assumption that 48% of additional jobs would not exist without startups (in line with model developed by Froehlich, 2023))

~ 8.2 bn. € total external financing

~ 0.72 bn € in 2023 in Germany

~ 56.1 bn. € total valuation in 2023

→ **9%** of total German VC investments in 2023

(Former) faculty[3] of LMU has filed **~560 patents**

1: All startups that are founded by former students and faculty of LMU are included – including international founders and companies
2: All positions at institution
3: Patents, that are filed by former and active faculty of LMU through LMU are included
Sources: *Dealroom database: all* startups that are founded until Nov. 2023 are included; PATSTAT database for patent data: all from 2014-2022 filed patents are included

2: Entrepreneurial Impact of Technical University Berlin

Former students and faculty[1] of TUB have founded **~720 startups**

Of which are:

9 companies unicorns

(Valuation >= 1 bn.$)

15 companies potential future unicorns

(Valuation 250 mn.$ - 1 bn.$)

~ 35% high-tech companies

(split via industry classification in Dealroom database)

~ 11% ESG impact companies

(split via focus on Sustainable Development Goals in Dealroom database)

These companies have:

~ 48,500 jobs created

(Estimate through company size)

→ **6.7** jobs per university staff[2]

~ 154 mn. € hypothetical tax revenue brought in

(Estimate through average income tax in Germany with assumption that 48% of additional jobs would not exist without startups (in line with model developed by Froehlich, 2023))

~ 3.8 bn. € total external financing

~ 0.29 bn € in 2023 in Germany

~ 76.0 bn. € total valuation in 2023

→ **4%** of total German VC investments in 2023

(Former) faculty[3] of TUB has filed **~730 patents**

1: All startups that are founded by former students and faculty of TUB are included
2: All positions at institution
3: Patents, that are filed by former and active faculty of TUB through TUB are included
Sources: *Dealroom database: all* startups that are founded until Nov. 2023 are included; PATSTAT database for patent data: all from 2014-2022 filed patents are included

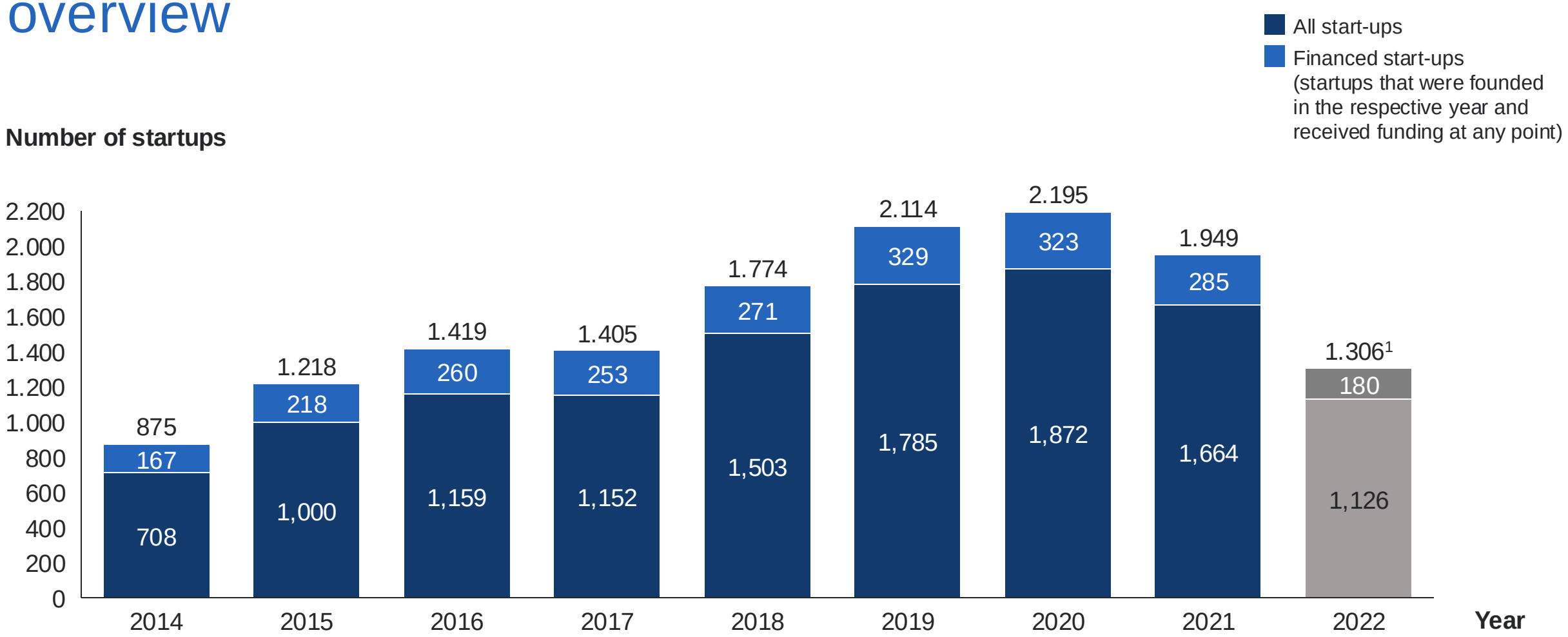
Contents

3: Entrepreneurial impact over time: Key Takeaways

- Looking at the total numbers of all faculty- and student-founded startups between 2014-2021, there is a steady rise in numbers, with exceptions in 2016 and in 2021.
- The institutions that lead the rankings for the separate years mostly stay the same, with TU Munich leading and TU Berlin following the ranking for all consecutive years.
- A few changes, can, however, still be noted
  - RWTH Aachen is moving up to a rank in the top 5 within a few years from not being in the top 10 until 2016.
  - DHBW Stuttgart is not listed in the top 20, except for 2020, where they rank 4 – possibly an impact of covid on downsizing of new jobs in corporates (DHBW is solely for students who work at corporates besides their studies “Duales Studium”), sparking entrepreneurship as alternative.

Image source: Pexels, 2024

3: Entrepreneurial impact ranking for separate years - overview

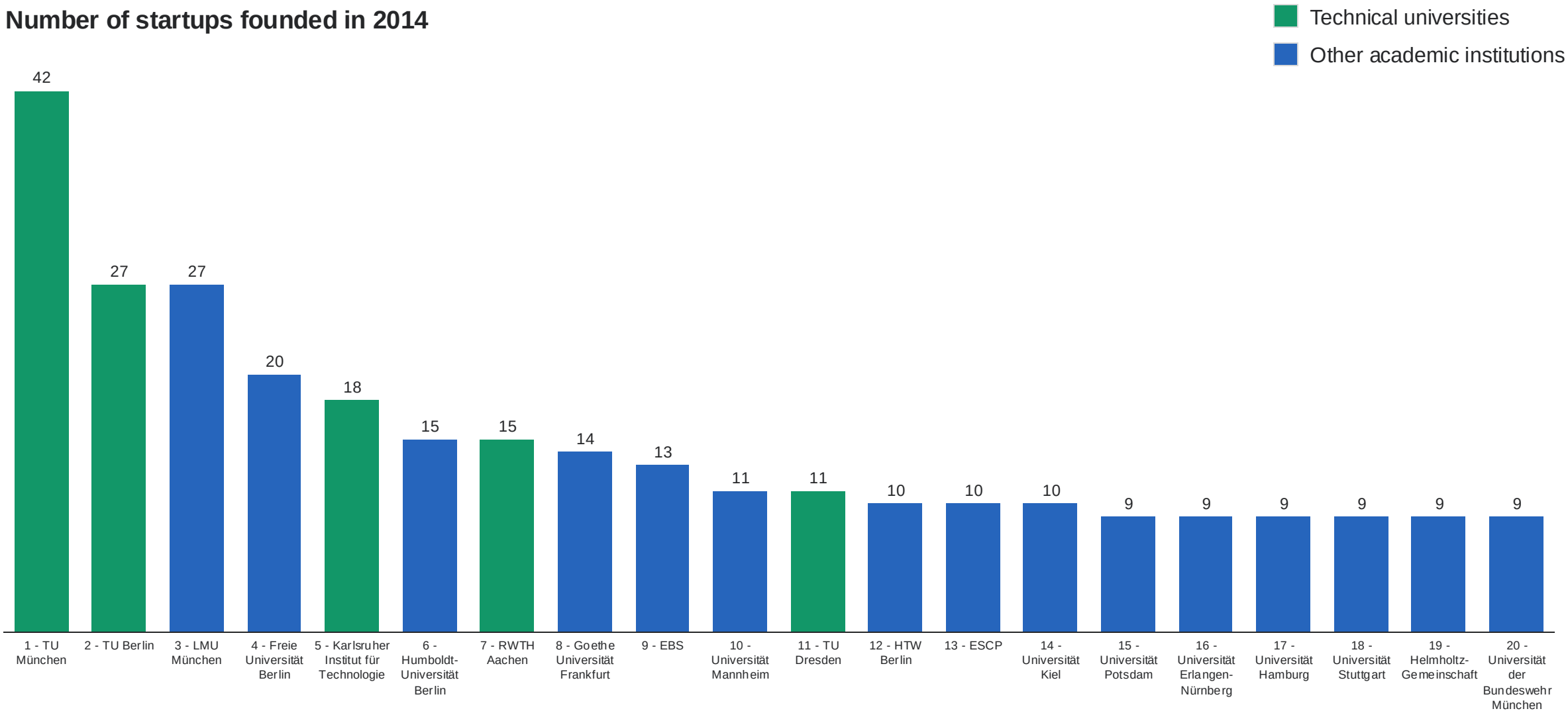


1) 2022 does not include matching through Google and website searches, thus the data should not be compared to previous years

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)1)

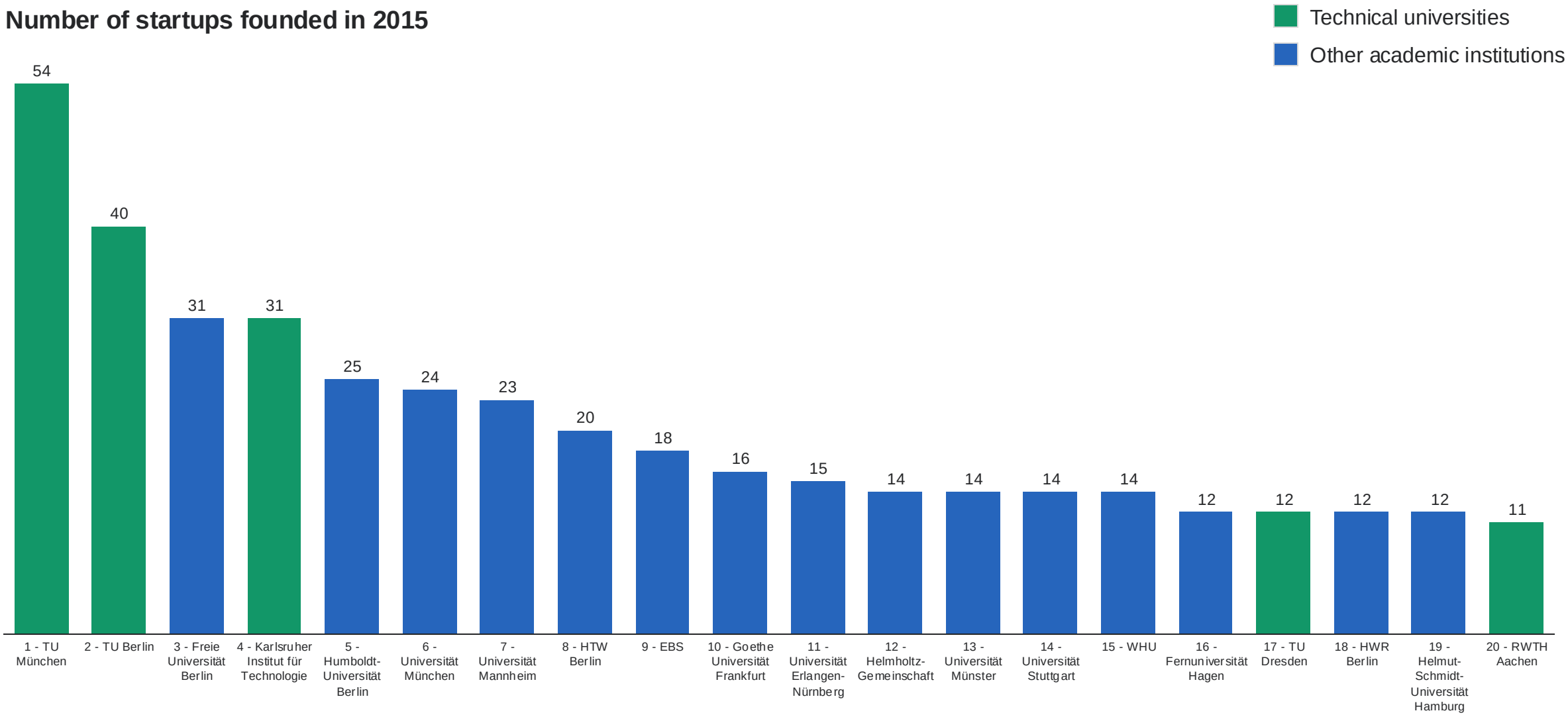
3: Entrepreneurial impact ranking for separate years: 2014



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

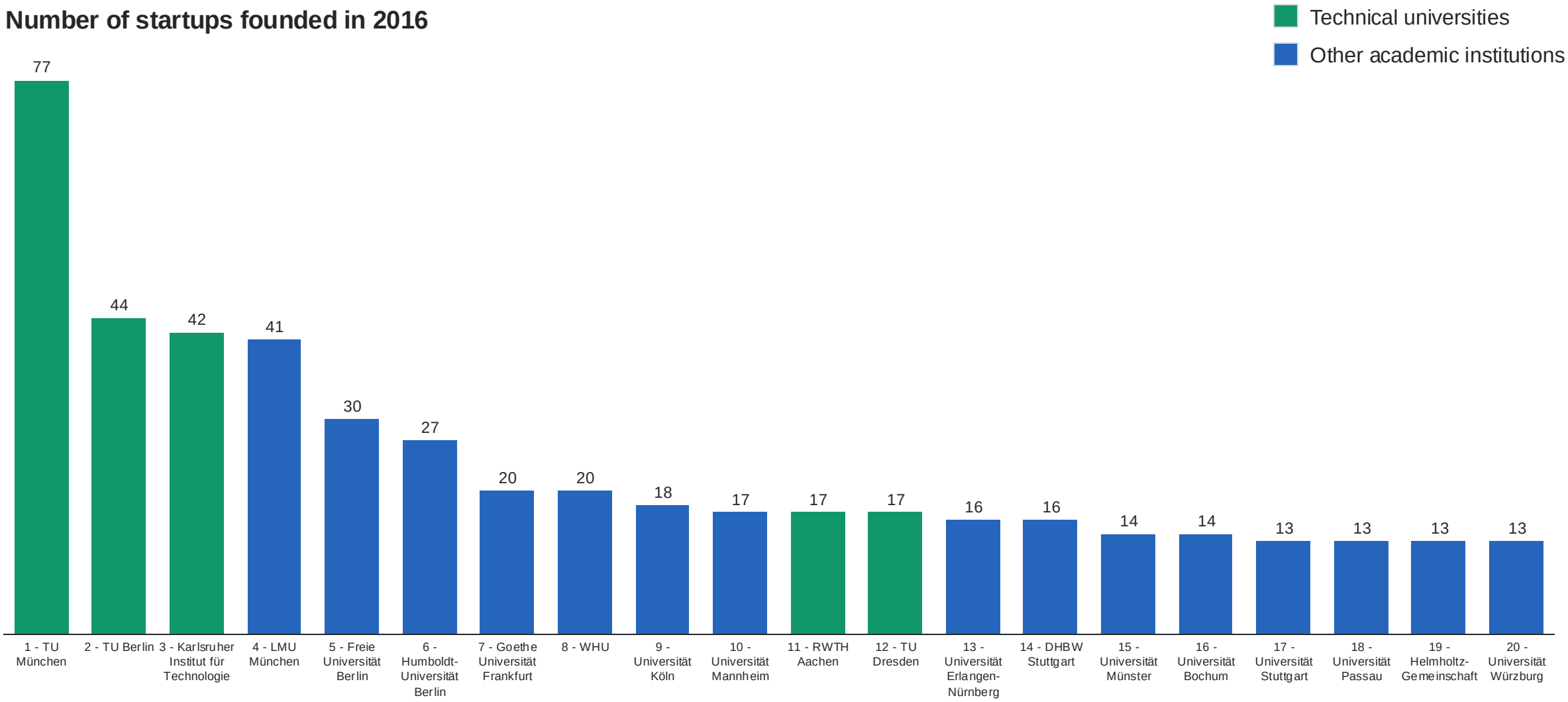
3: Entrepreneurial impact ranking for separate years: 2015



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

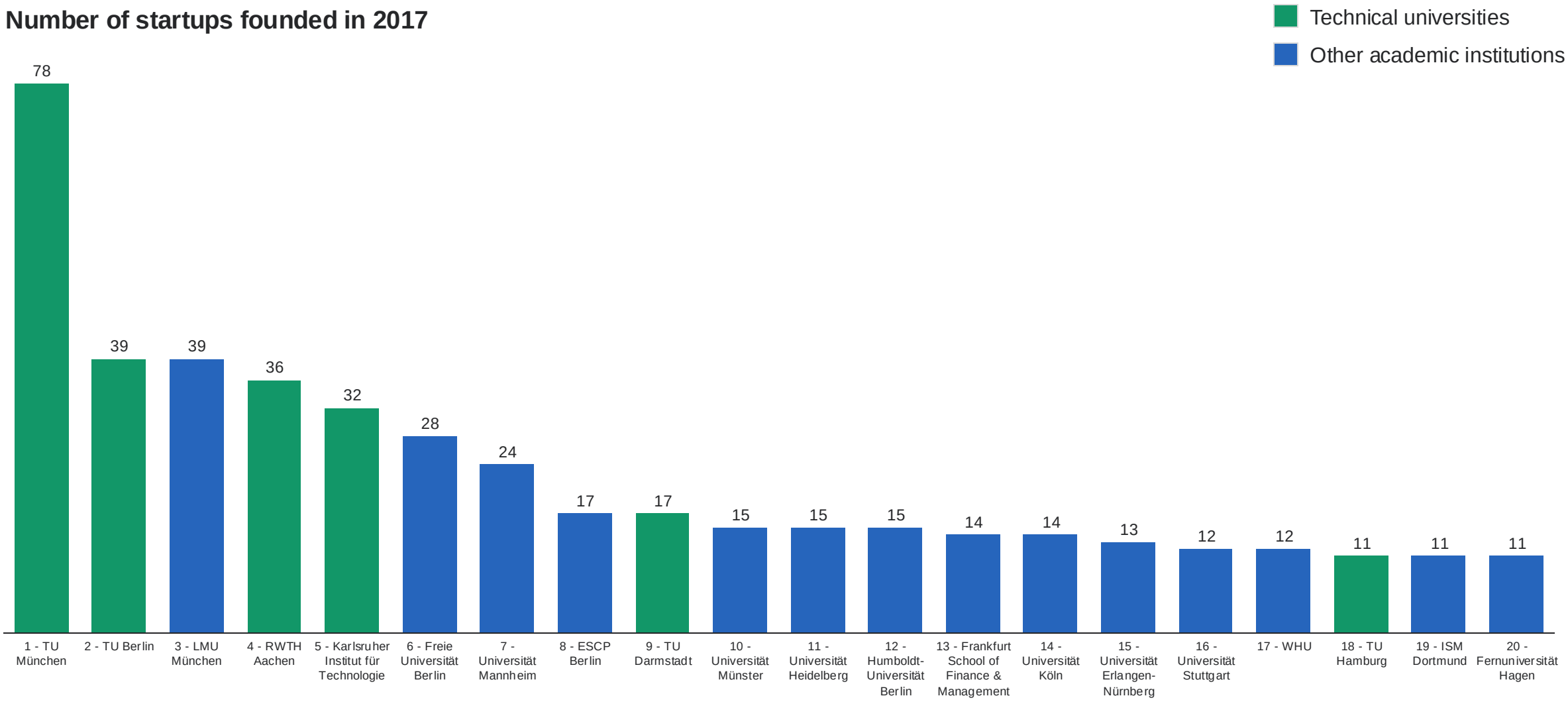
3: Entrepreneurial impact ranking for separate years: 2016



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

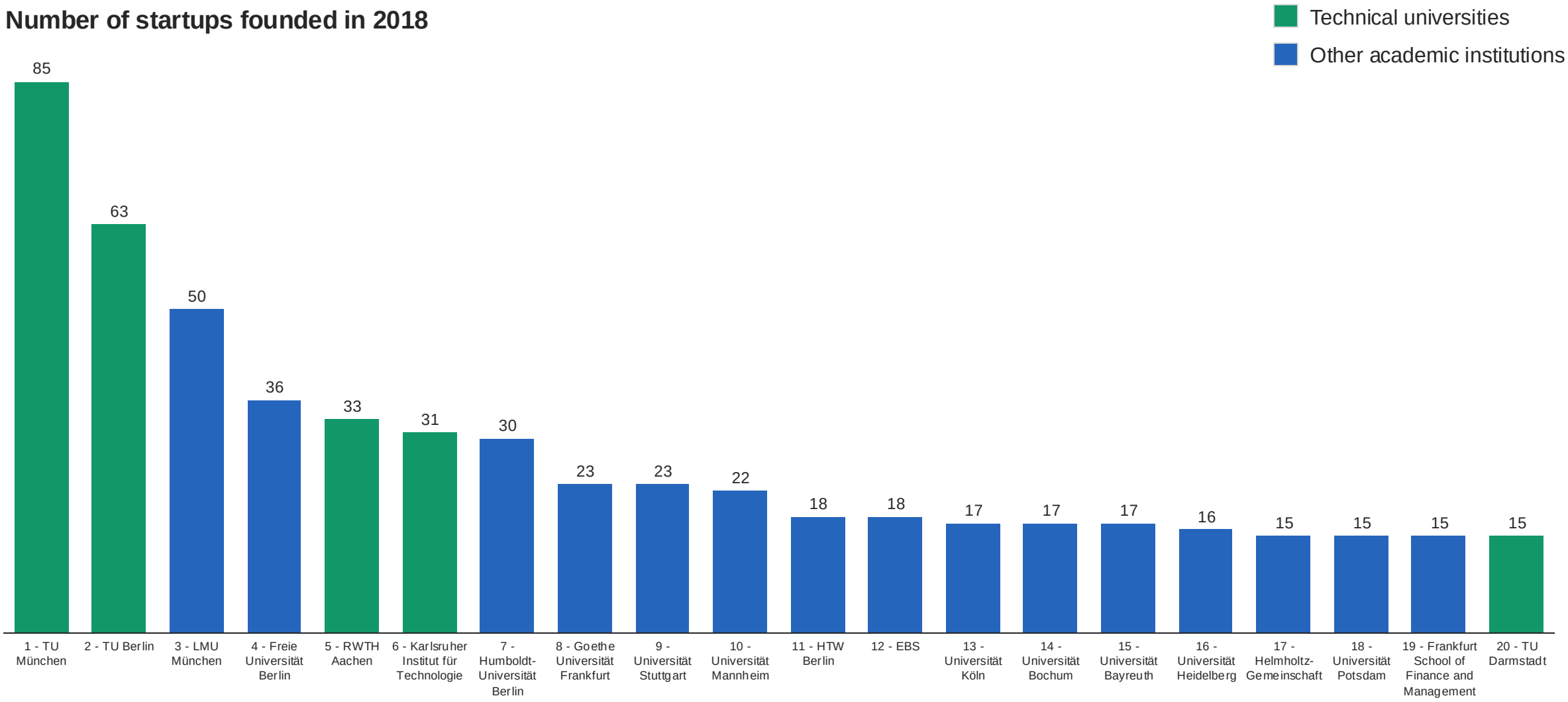
3: Entrepreneurial impact ranking for separate years: 2017



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

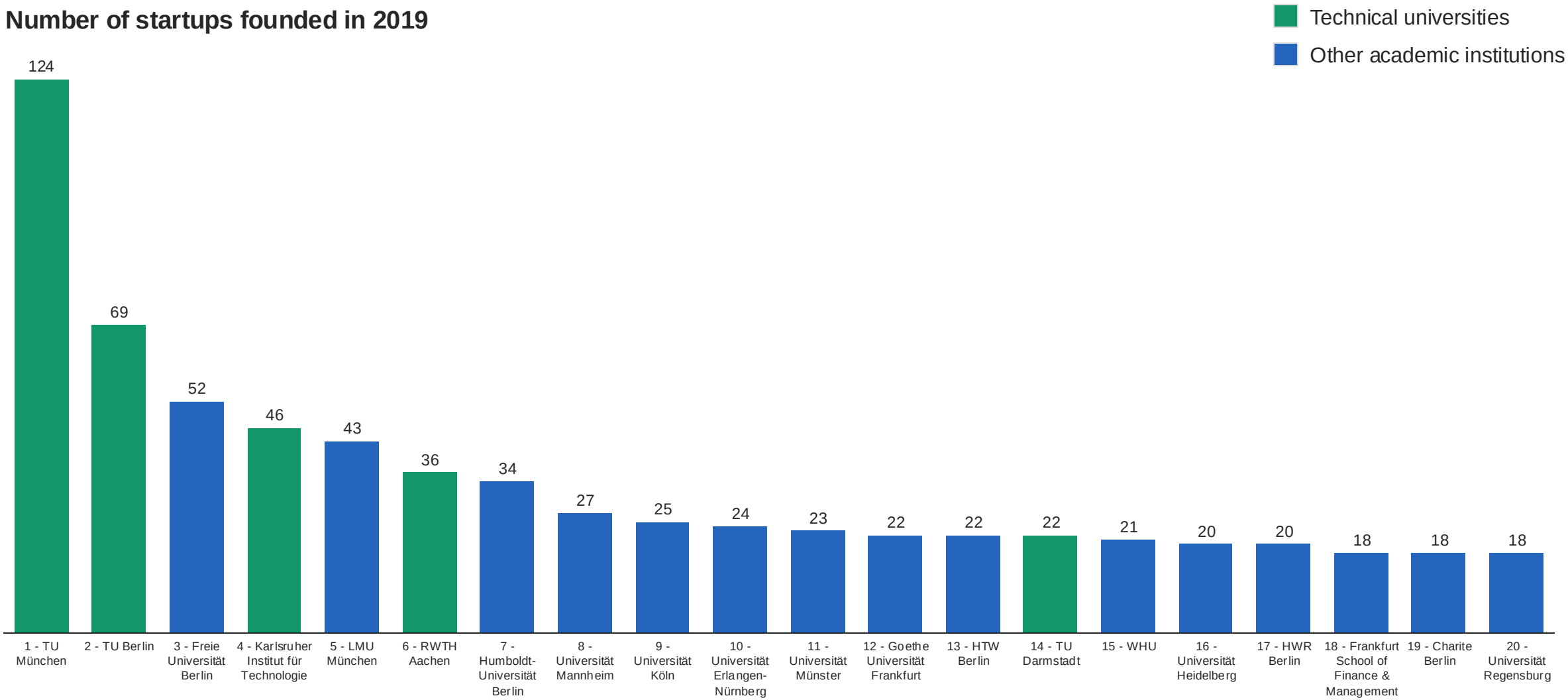
3: Entrepreneurial impact ranking for separate years: 2018



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

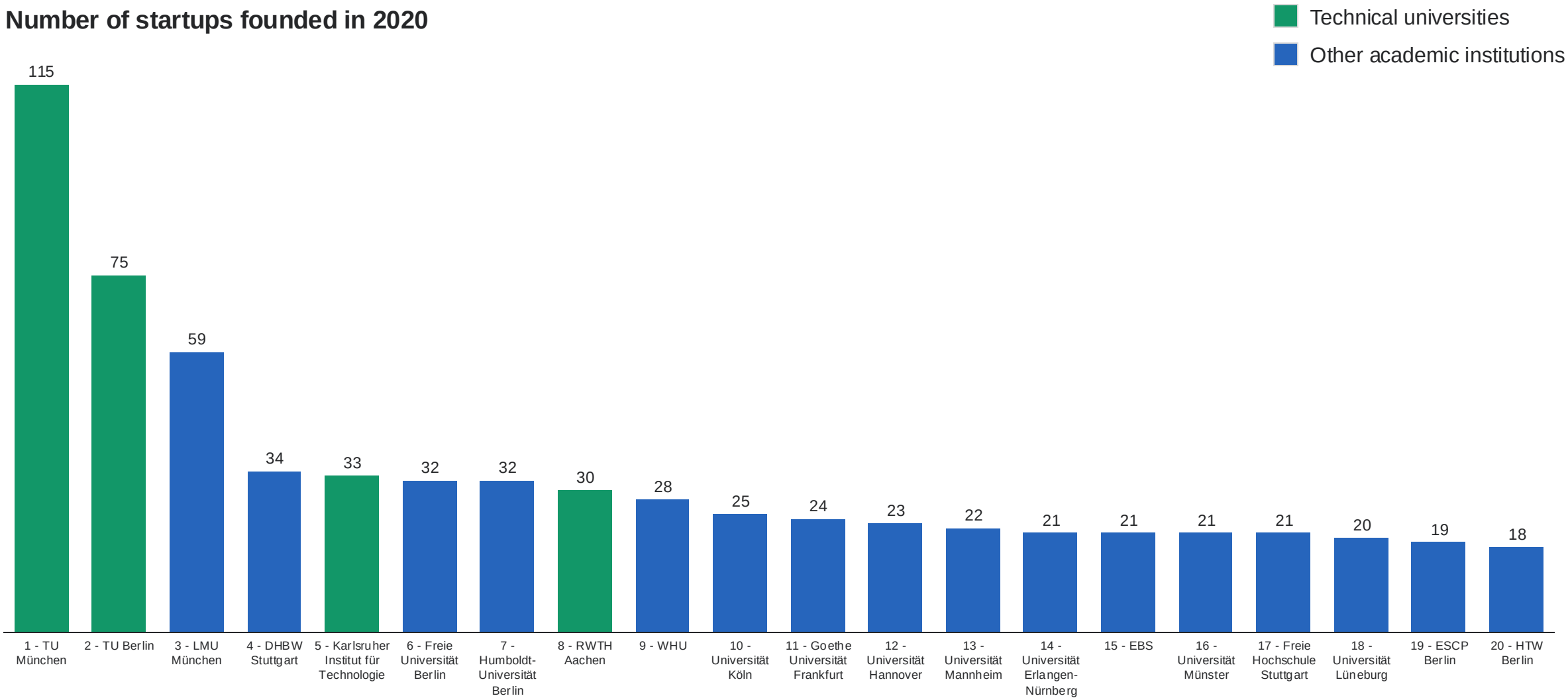
3: Entrepreneurial impact ranking for separate years: 2019



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

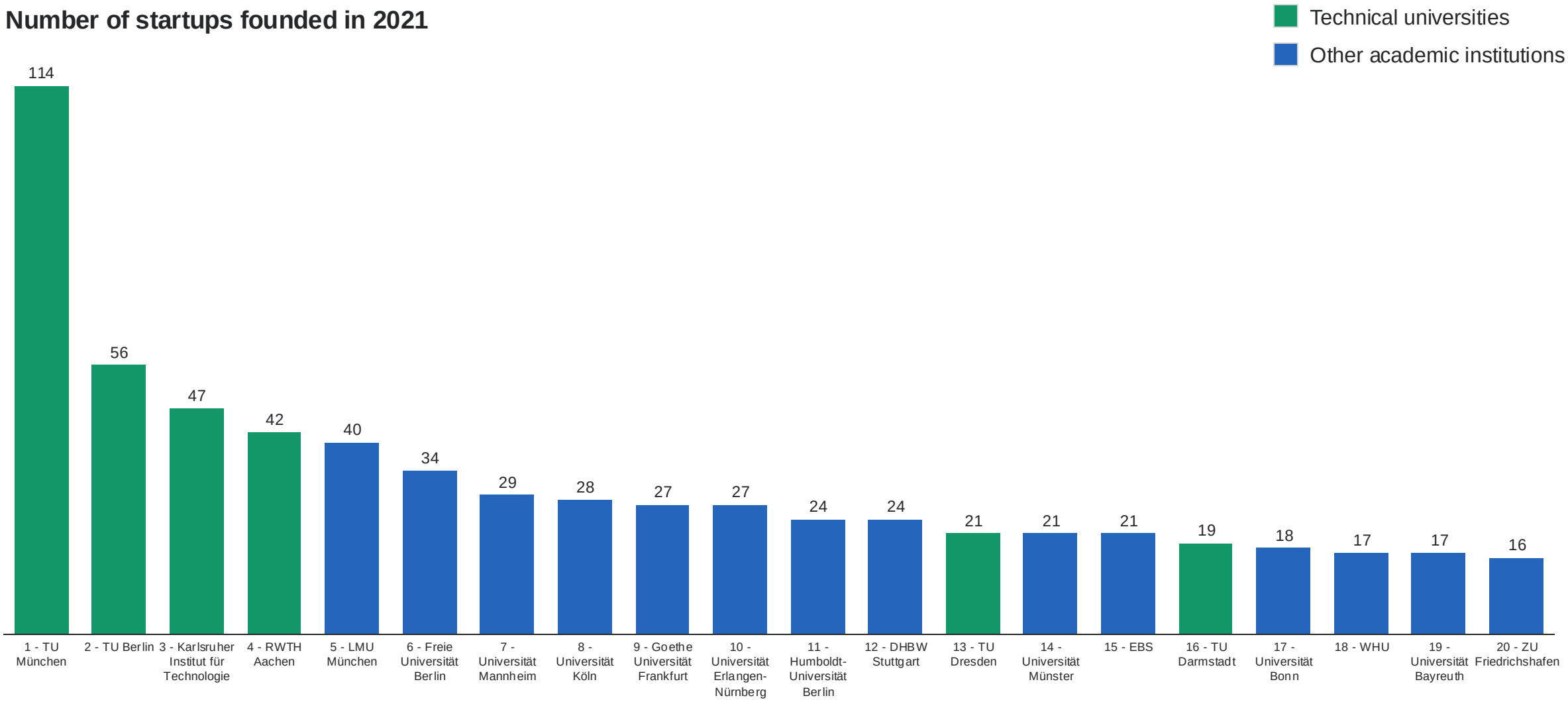
3: Entrepreneurial impact ranking for separate years: 2020



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

3: Entrepreneurial impact ranking for separate years: 2021



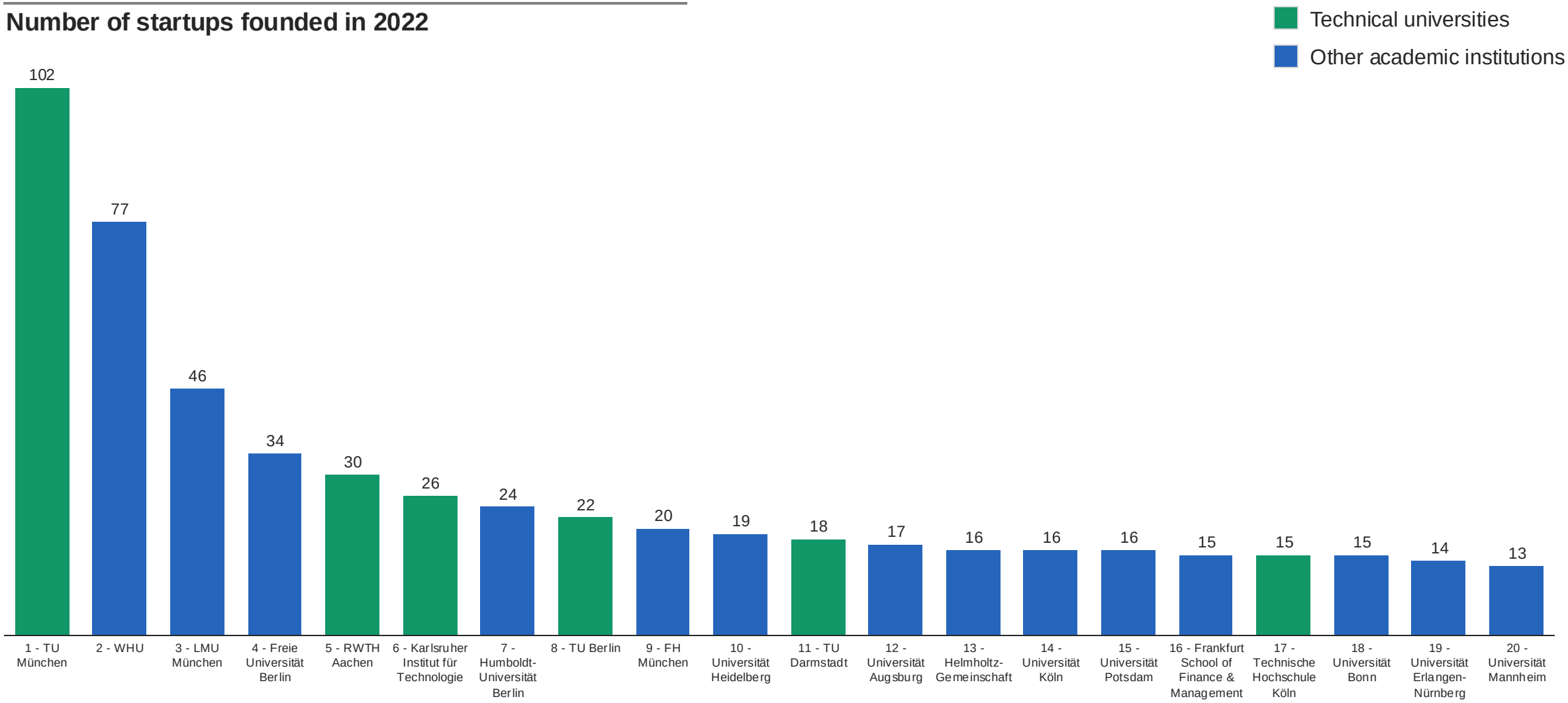
Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

4: Entrepreneurial impact ranking for separate years: 2022

PRELIMINARY - NOT ALL MATCHING SOURCES INCLUDED. UPDATE TO FOLLOW IN 2025 RANKING

Number of startups founded in 2022



Excluding LinkedIn, Google Search and Website matches (as compared to other years)

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*; University data: Statistisches Bundesamt (year 2020/2021)

Contents

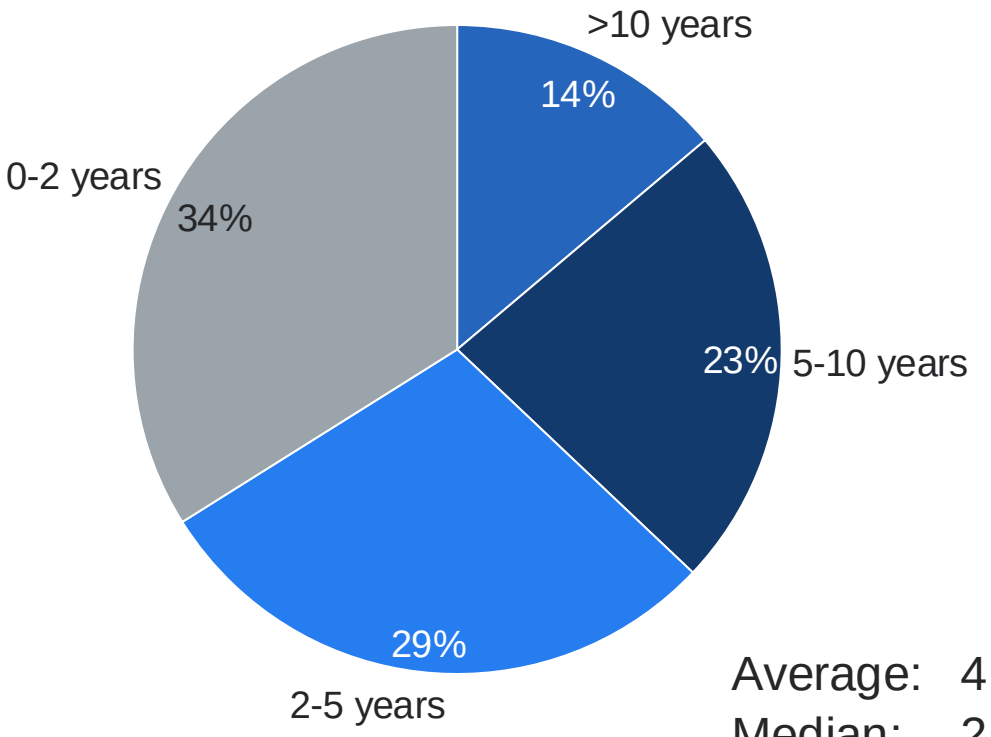
4: Time to startup after graduation: Key Takeaways

- The highest share of founders starts their venture within 4 years after graduation.
- There is a difference in startup time after graduation of almost one year between male and female founders.
- The average time to founding varies highly between academic institutions, with some founders taking more than 10 years and some less than one year.
- About the same share of founders starts their venture with a bachelor's degree and with a master's degree. PhD students only make up 8% of the founder's population.

Image source: Pexels, 2024

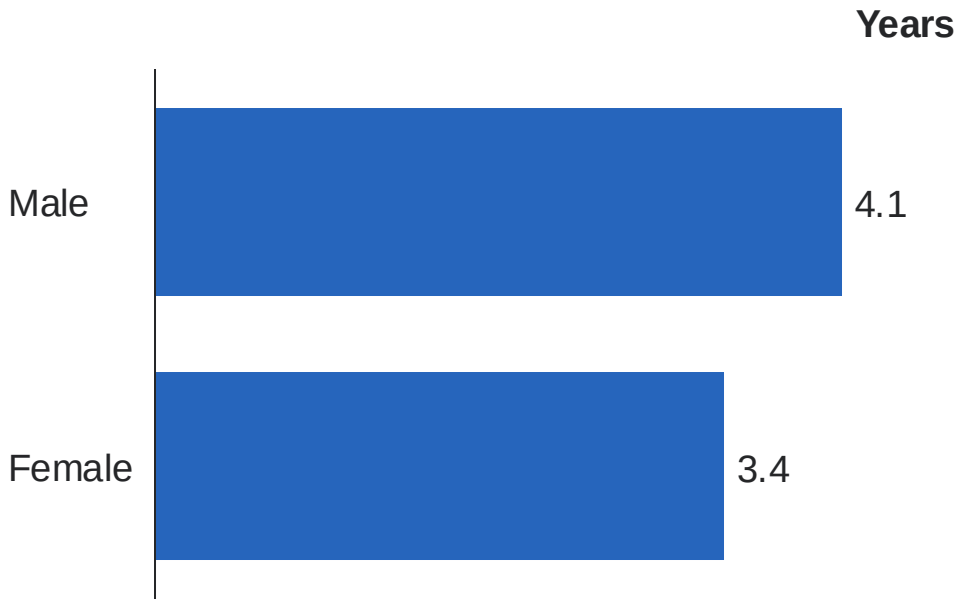
4: On average, founders start their venture within 4 years after graduating, *female founders are faster*

Time until founders start their venture after graduating from university, in percent



Average: 4 years
Median: 2 years

Average time until startup is founded after graduation by gender, in years

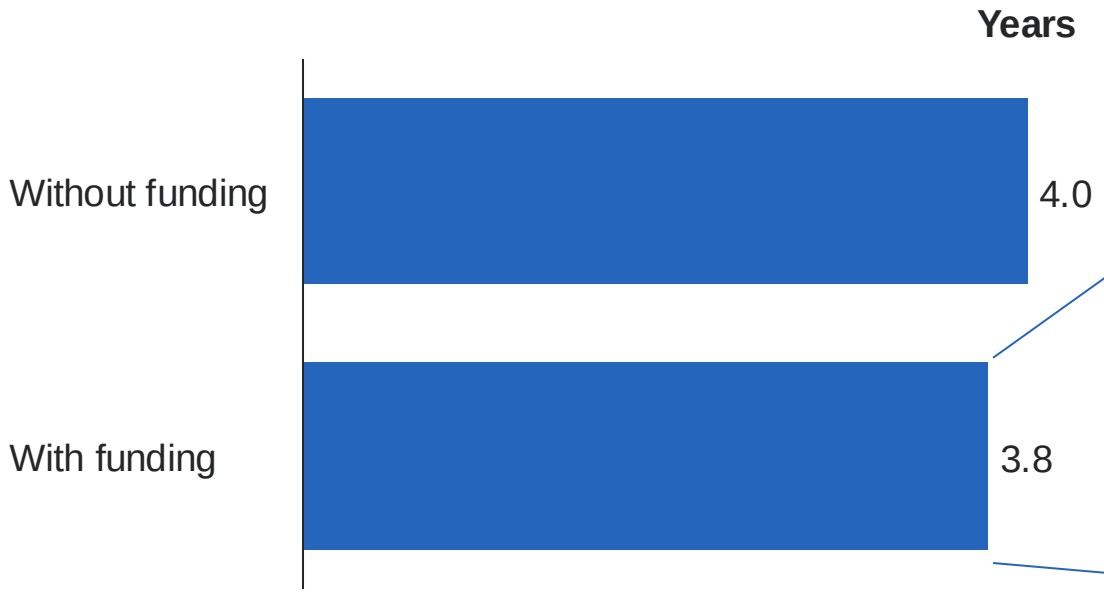


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

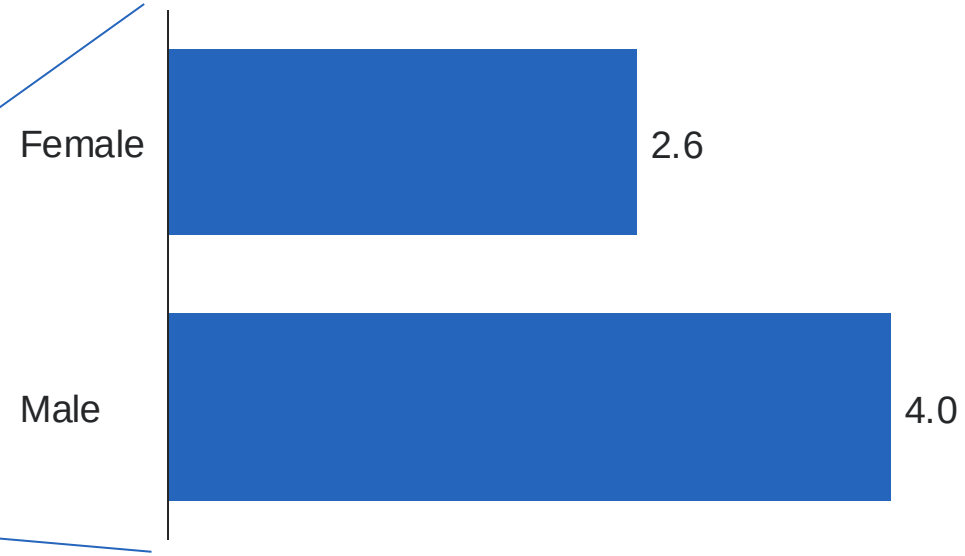
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

4: Founders of funded startups are slightly faster than founders who did not raise capital, *females are even faster*

Average time until founder starts company after graduation by fundraising ability, in years



Average time until founder starts company for startups that received funding, in years



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

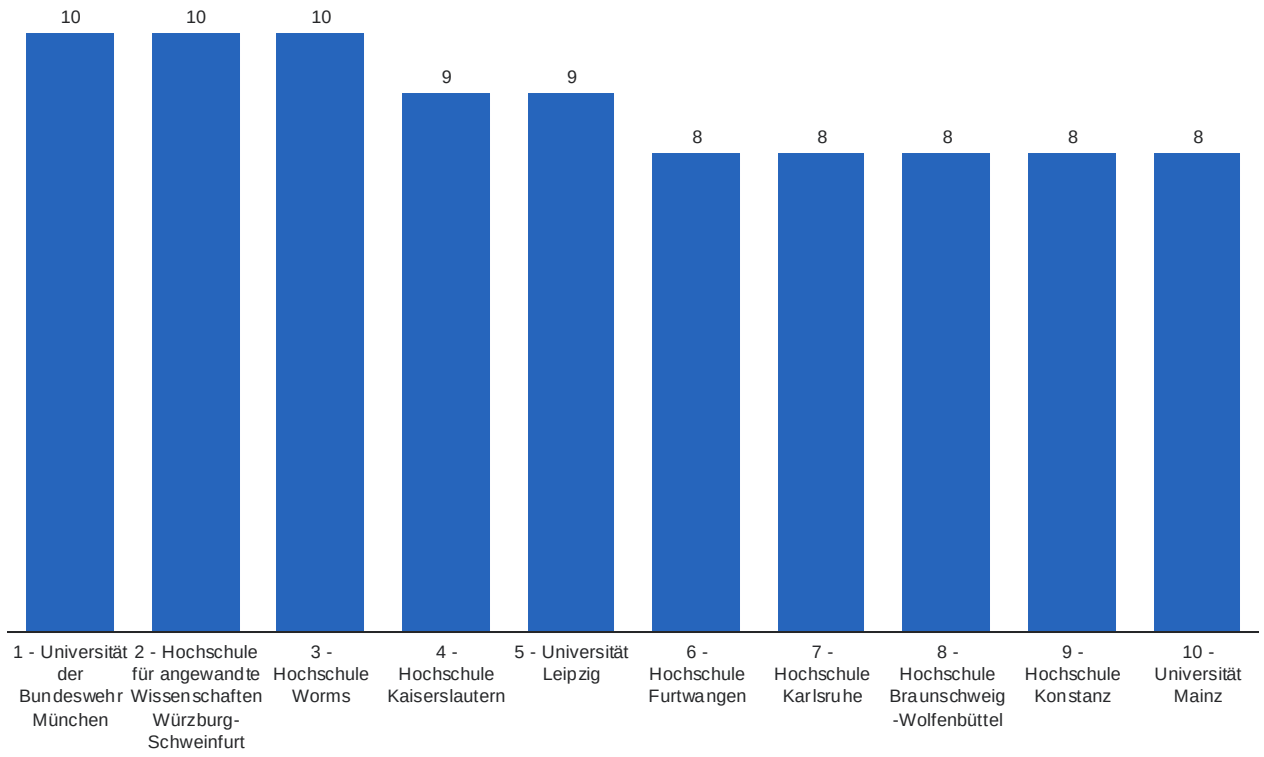
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

4: Graduates from 12 institutions start their venture on average within one year or less after graduation

Institutions where founders start their venture within one year or less on average after graduation, alphabetical order

accadis Hochschule Bad Homburg
CODE University of Applied Sciences Berlin
h_da – Hochschule Darmstadt
Hochschule für angewandte Wissenschaften Neu-Ulm
Hochschule Ravensburg-Weingarten
Ostbayerische Technische Hochschule Regensburg
SRH Hochschule Heidelberg
Technische Hochschule Ingolstadt
Technische Hochschule Wildau
Universität Paderborn
Universität Lüneburg
XU Exponential University Potsdam

Top 10 universities where founders take the longest to start a venture after graduating, in years

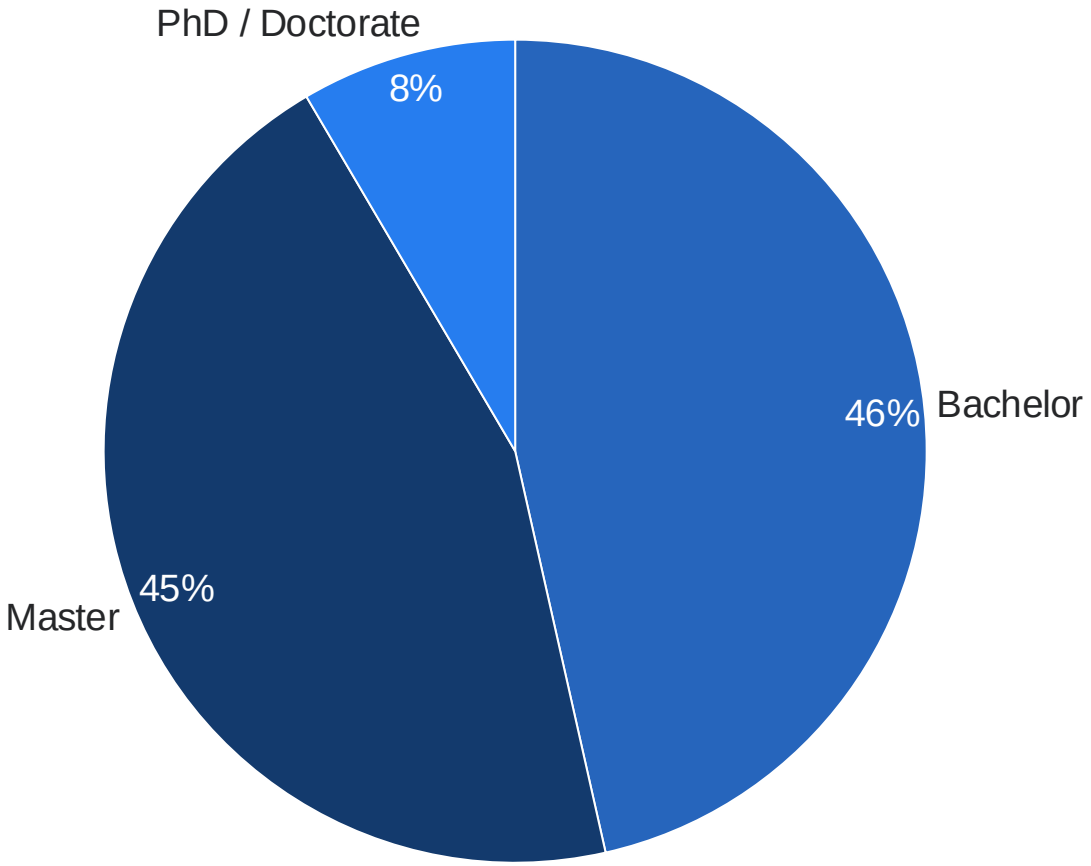


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

4: About the same share of founders obtains a bachelor's degree or a master's degree

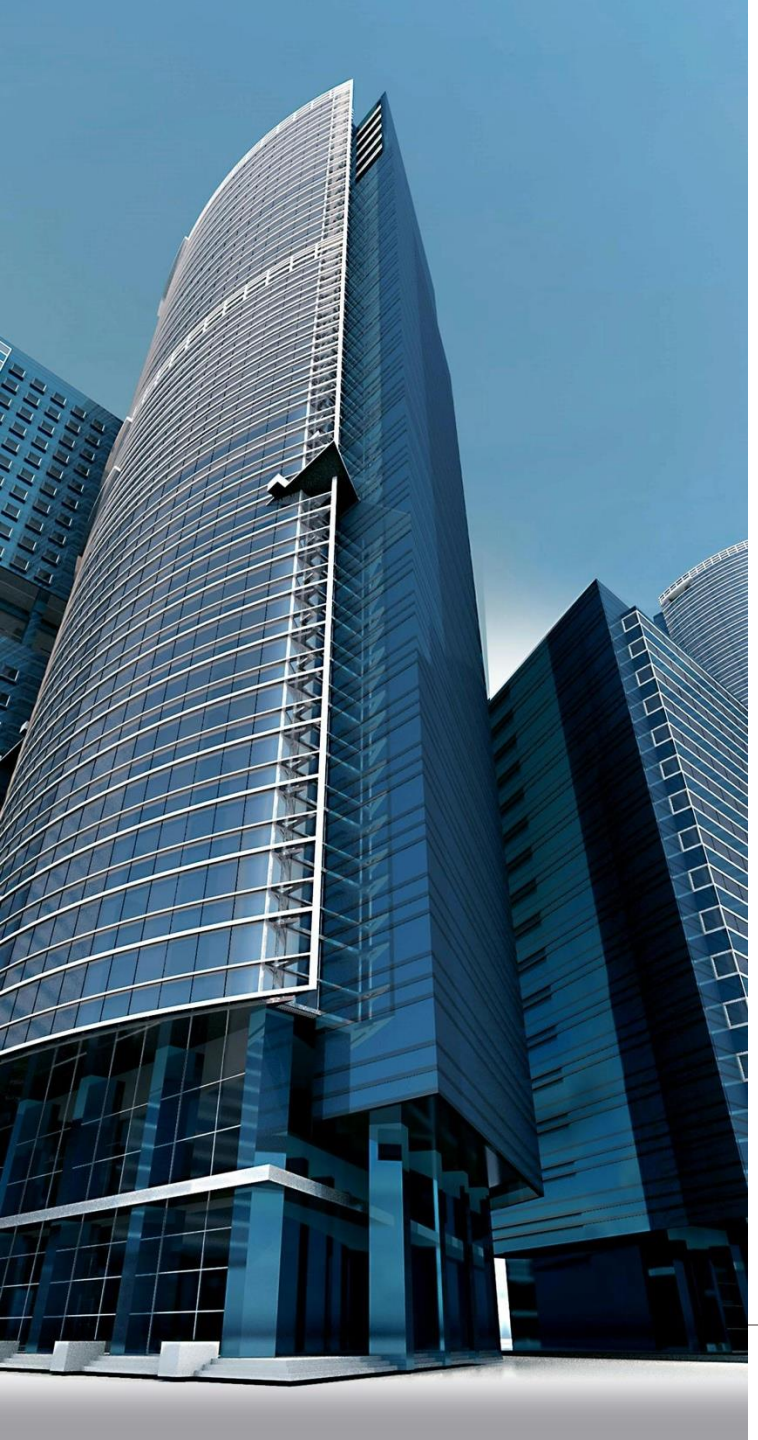
Highest university degree of founders, in percent



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Contents



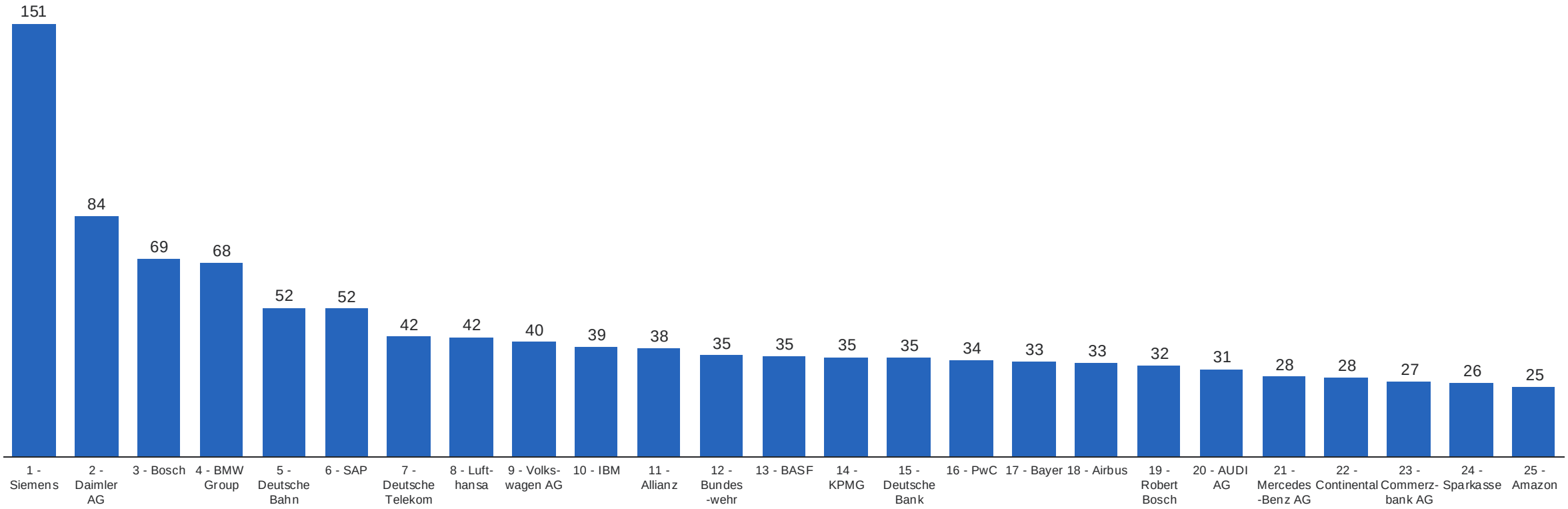
5: Previous industry experience: Key Takeaways

- Siemens is, by far, the company most mentioned in previous experience of all founders and founders who were able to raise funding.
- Overall, the large DAX corporates seem to lead the way in founder's previous experience. For founders who were able to raise funding for their venture, additionally strategy consulting firms and unicorn startups are predominant in the top 25 previous employer ranking.

Image source: Pexels, 2024

5: Siemens is the company most mentioned in founder's previous industry experience

Number of founders who mentioned a company in their work experience, absolute mentions in thousand

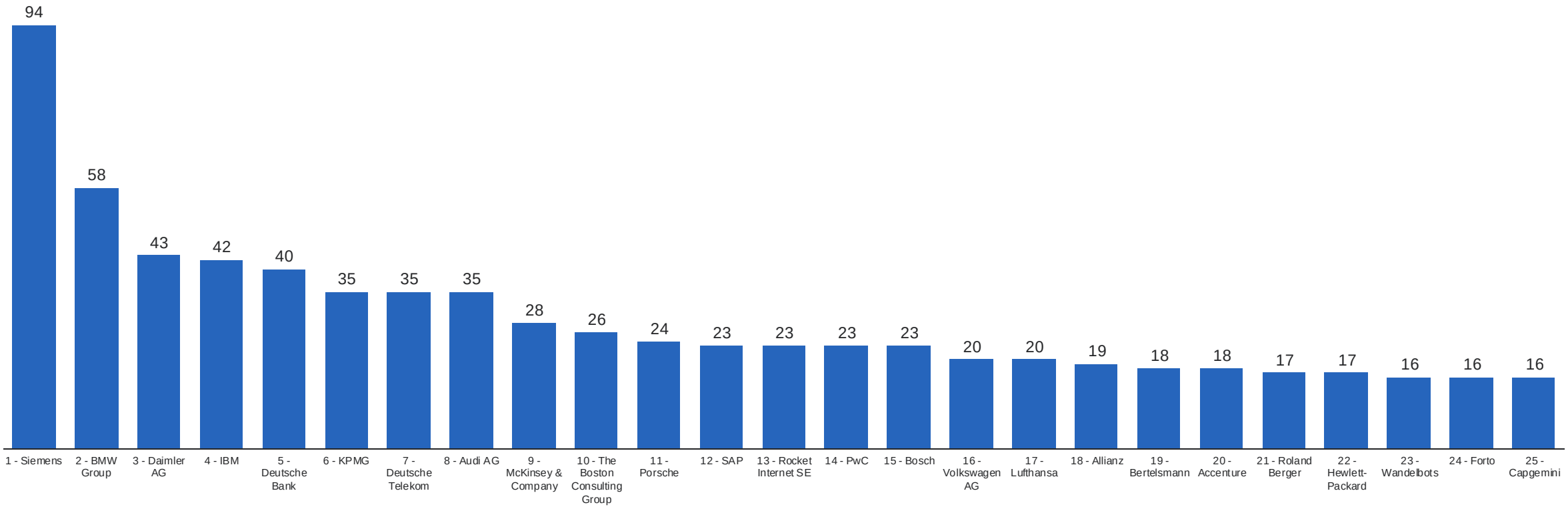


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

5: Siemens is the company most mentioned in founder's previous industry experience for startups with funding

Number of founders with funding who mentioned a company in their work experience, absolute mentions



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Contents

6: Founder diversity ranking: Key Takeaways

- Ethnically diverse founding teams make up a higher share (38%) than gender diverse founding teams (27%)[1].
- More than 2/3 of founders in Germany are from Europe, but less than 50% of founding teams consist of team members that are only from western Europe.
- Four academic institutions have >40% of ethnically diverse founding teams, while the highest share of founding teams with at least one female founders is at 39%.

Image source: Pexels, 2024

1. Intersectional founding teams (10%) added to both ethically diverse (28%) and gender diverse (17%) shares

6: Founder diversity ranking: Method and interpretation notes

Method:

How did we classify gender and ethnicity to founder teams?

- In the first step, we created a sub sample with startups that consist of at least 2 co-founders since we are interested in the diversity of founder teams.
- Gender and ethnicity of the founders are classified based on the names:
  - Gender is assigned through the genderize.io API, which leverages data from almost 1 billion names worldwide. If a name can be used for both male or female, it is left open as unassigned / neutral.
  - Ethnicity on country-level is assigned through the nationalize.io API, which leverages data from almost 1 billion names worldwide. Countries are assigned based on the highest statistical likelihood of occurrence of that name in a country. Since this is often not clear cut, we aggregate the assigned countries to regions (Western Europe, North America, etc.) for our analysis.

Notes and limitations for the interpretation of the results

- We analyze the diversity of founder teams across 3 dimensions:
  - **Gender diversity:** A gender diverse team consists of a mixture of male and female co-founders
  - **Ethnic diversity:** An ethnic diverse team has at least one co-founder who is not from Western Europe
  - **Intersectionality:** An intersectional diverse founder team is diverse across both dimensions, meaning a team with male and female co-founders of which at least one of the co-founders is not from Western Europe
- Since we looked at founder teams only and classified gender and ethnicity based on statistical likelihood of occurrence of the name, the rankings of universities should be interpreted with care and rather be seen as an indication

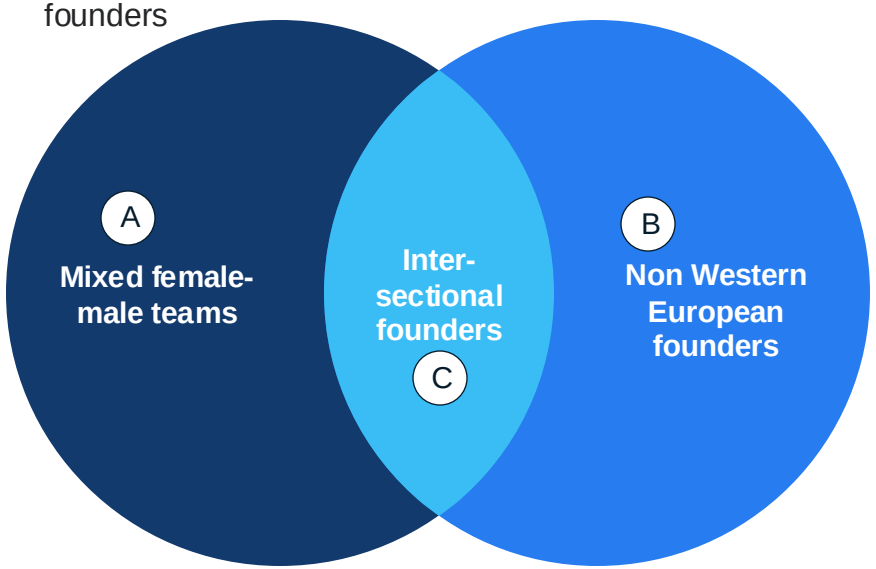
6: Founder diversity ranking by all dimensions overview

Classification of diversity dimensions in founding teams

We used the overlap of gender and ethnicity diversity to create the ranking of intersectional teams

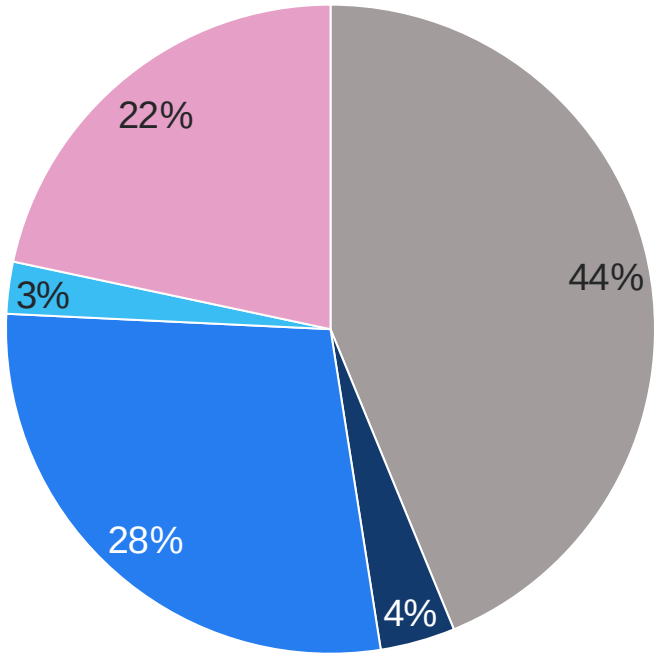
Founders are classified as male/female and Western European/non Western European, with intersectional founder teams showing both diversity dimensions.

Classification of gender and ethnicity (regions) to founders is based on the statistical prevalence of the names of the founders



Founder team composition by diversity dimensions of team members – excluding single founders, in percent

Total n = 19.197 startups



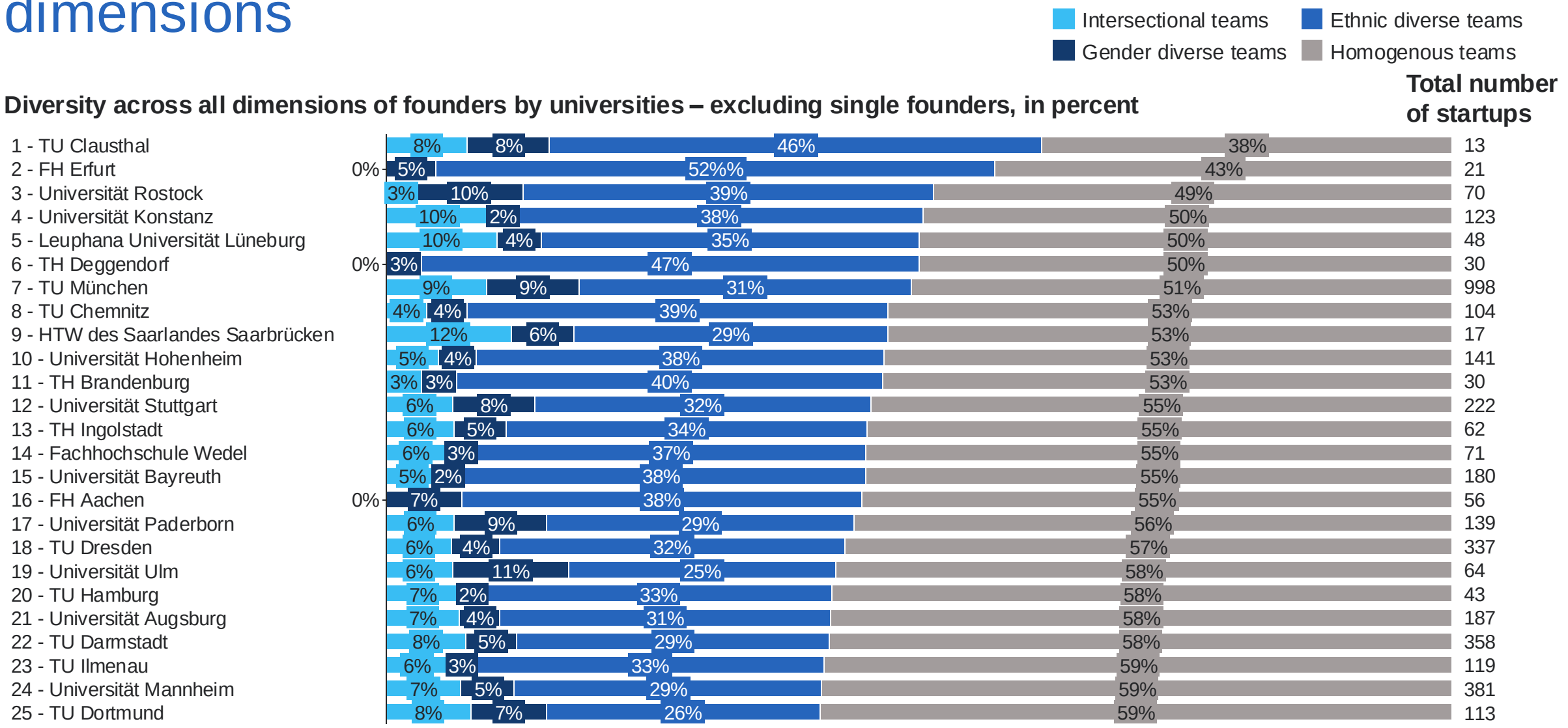
- Male, Western European founding teams
- A: Founding teams with mixed female-male founders
- B: Founding teams with at least one non Western European member
- C: Intersectional founding teams (founding teams with at least one female and non Western European member)
- All female founding teams

Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6: Founder team diversity ranking by all diversity dimensions



Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6A: Founder team diversity ranking by gender overview

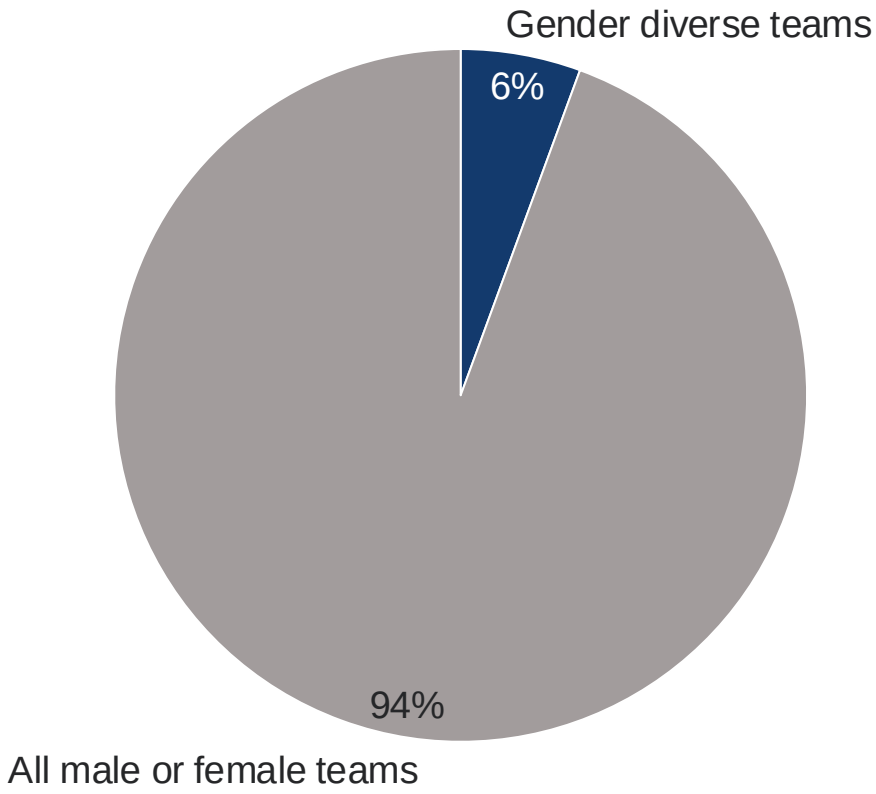
Classification of founder ethnicity

Founder gender information is retrieved through the most likely gender based on the statistical prevalence of names

We use the “genderize” API for the classification of gender by names: https://api.genderize.io

Founder team gender overview

Total n = 19.197 startups

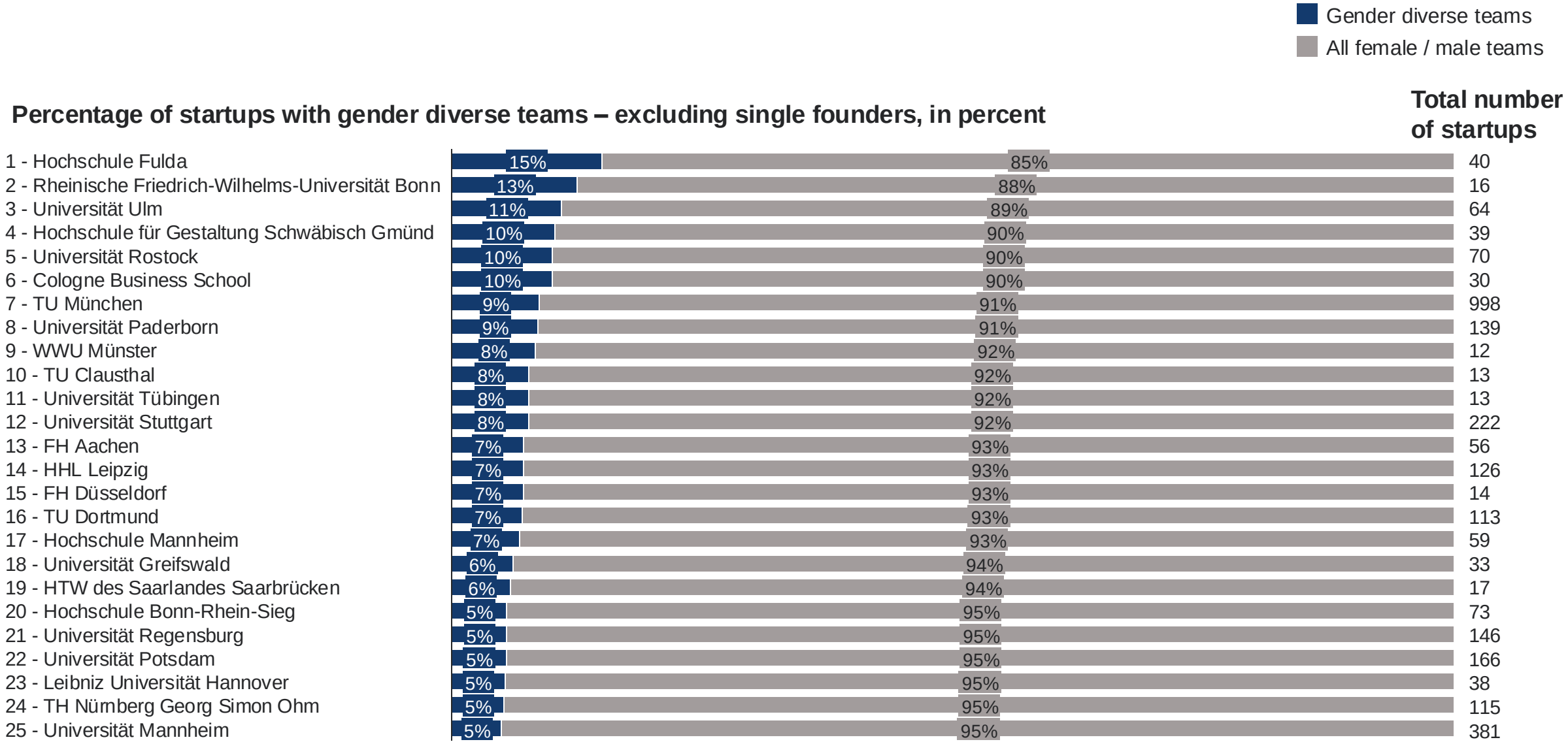


Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6A: Founder team diversity ranking by gender



Update based on new list of startups (including further identified startups until 2022). Included are all institutions for which 10 or more startups could be matched.

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6B: Startup team diversity ranking by ethnicity overview

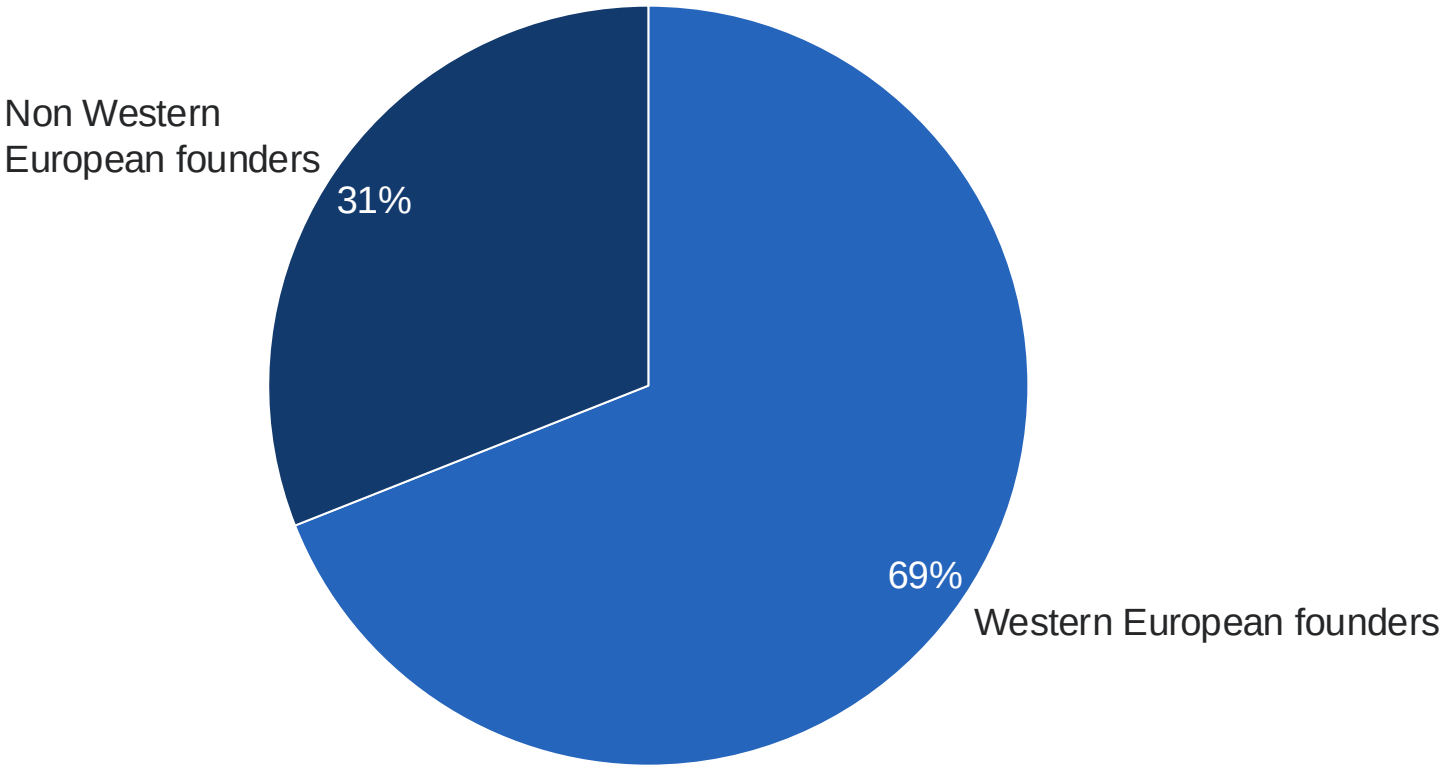
Classification of founder ethnicity

Founder ethnicity is retrieved through the most likely ethnic origin based on the statistical prevalence of the names in the different regions

We use the ”nationalize” API for the classification of the names to ethnicities: https://api.nationalize.io

Founder team ethnicity overview

Total n = 19.197 startups



Included are all institutions for which 10 or more startups could be matched

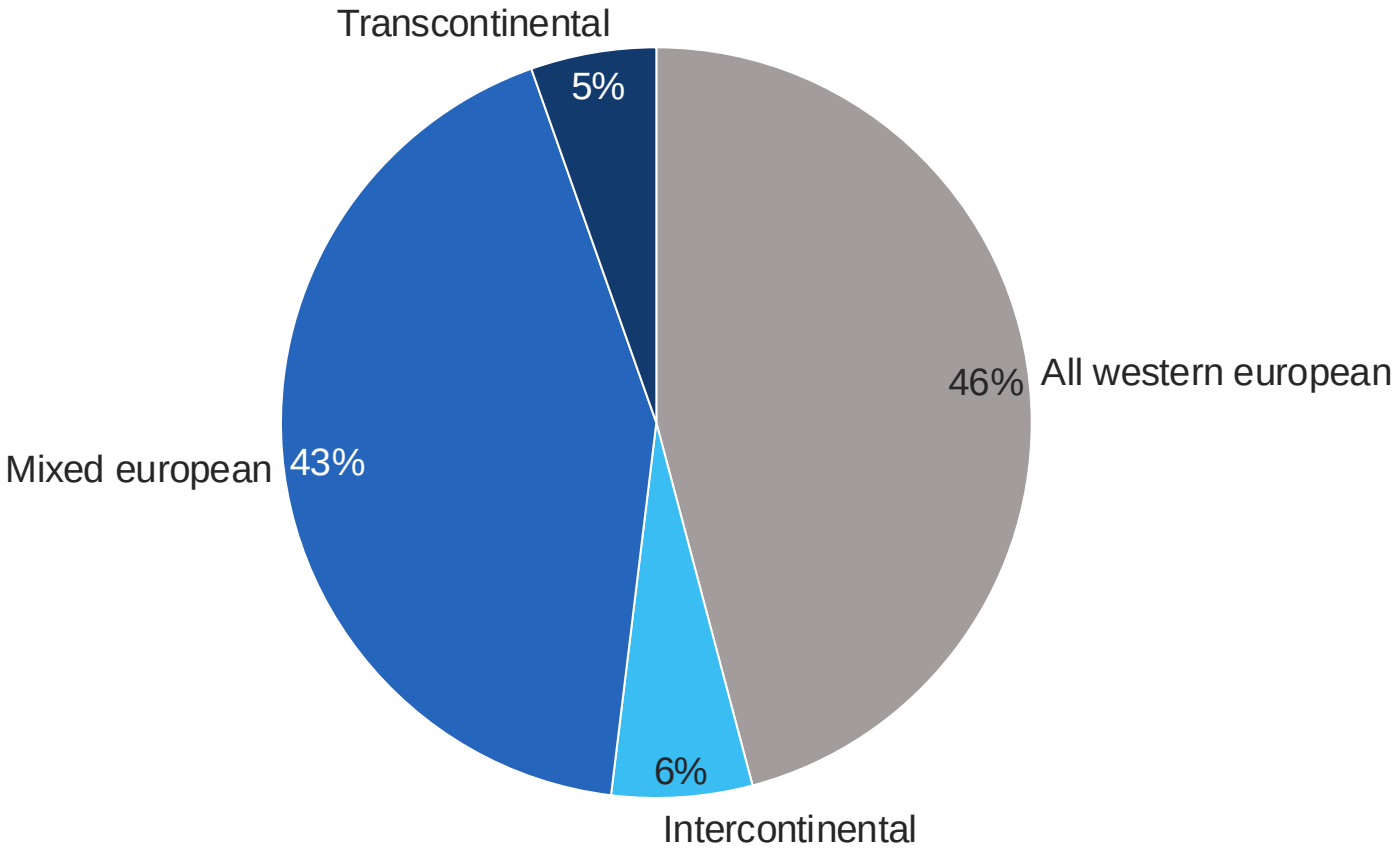
Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6B: Founder team diversity by ethnicity details

Founder teams composition by ethnicity of team members

Total n = 19.197 startups

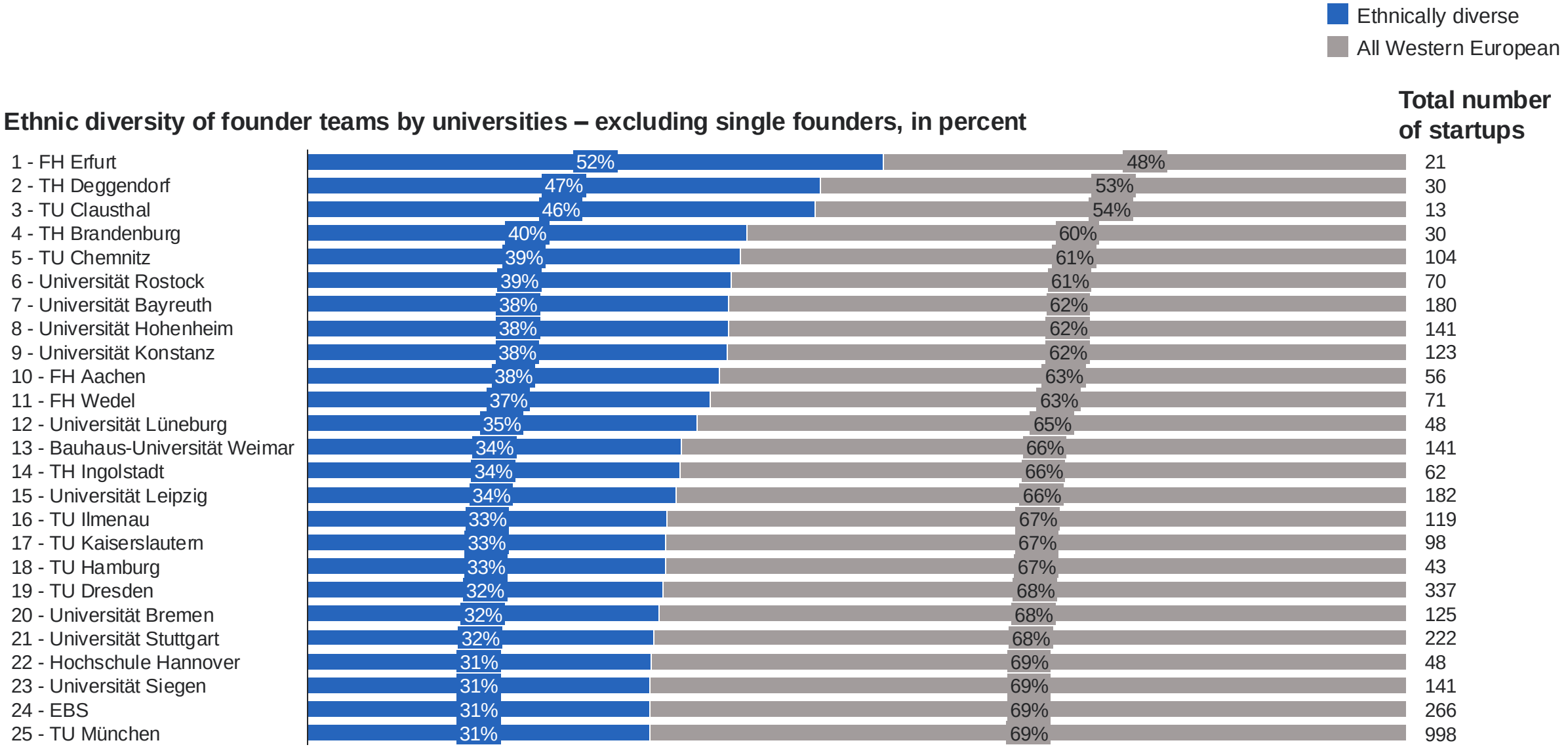


Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6B: Founder team diversity ranking by ethnicity

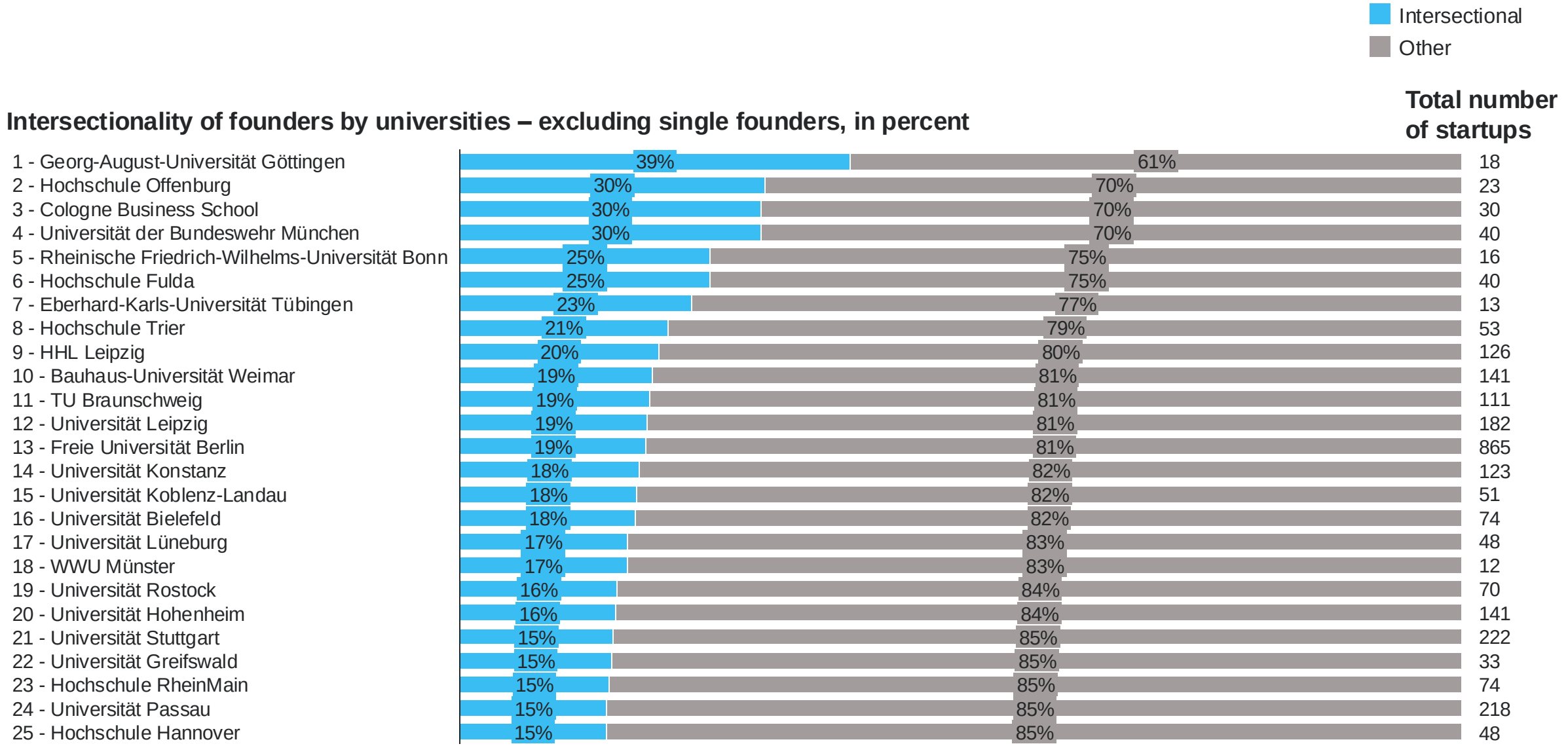


Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

6C: Founder team diversity ranking by intersectionality

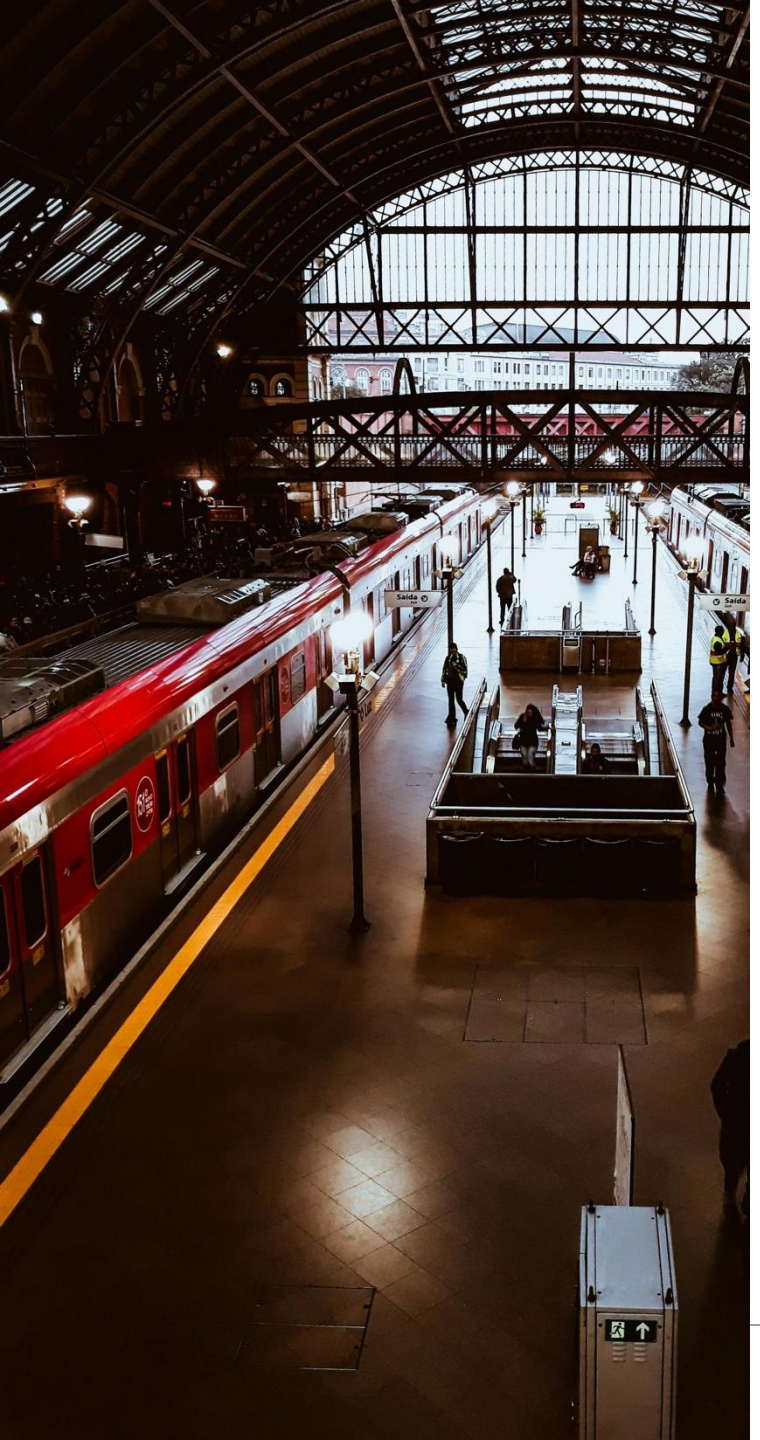


Included are all institutions for which 10 or more startups could be matched

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Contents



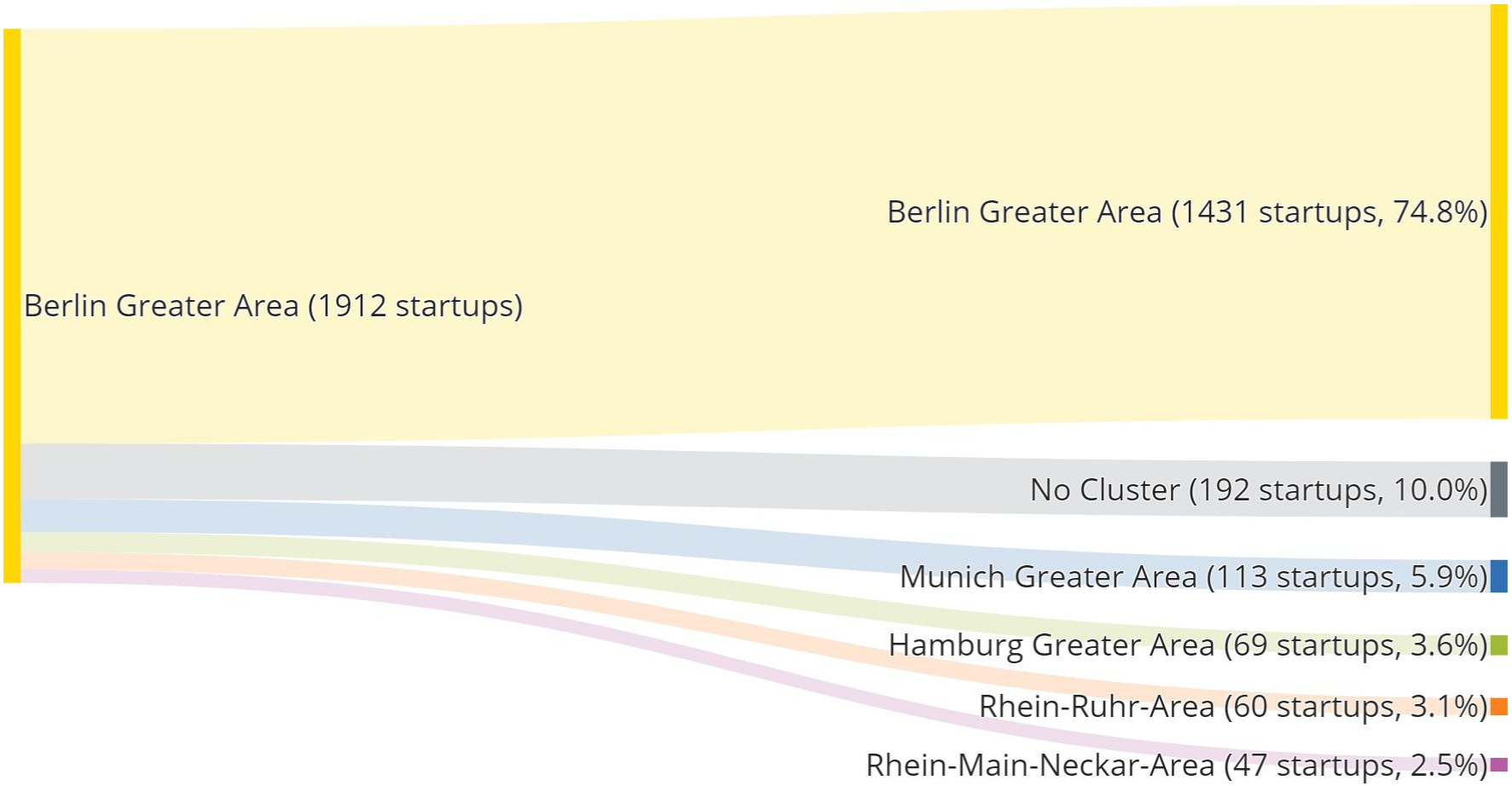
7: Founder migration ranking: Key Takeaways

- Only in Berlin and Munich more than 60% of founders remain in proximity of their universities.
- Berlin is #1 spot for startups to migrate towards, followed by Munich.
- For most location clusters ~30-40% of startups remain in area of the university.
- Migration patters have seen only small change since the COVID19-pandemic.
- Higher migration shares towards Berlin become apparent for Munich and Hamburg with +3-4 p.p.
- Migration towards "No Cluster" became more popular (+2-6p.p.) in Berlin, Munich, Rhein-Main, and Hamburg suggesting that startups also consider smaller regional clusters for their business activities-

Image source: Pexels, 2024

7: Founder migration for separate years: Berlin

Startups founded 2014-2022

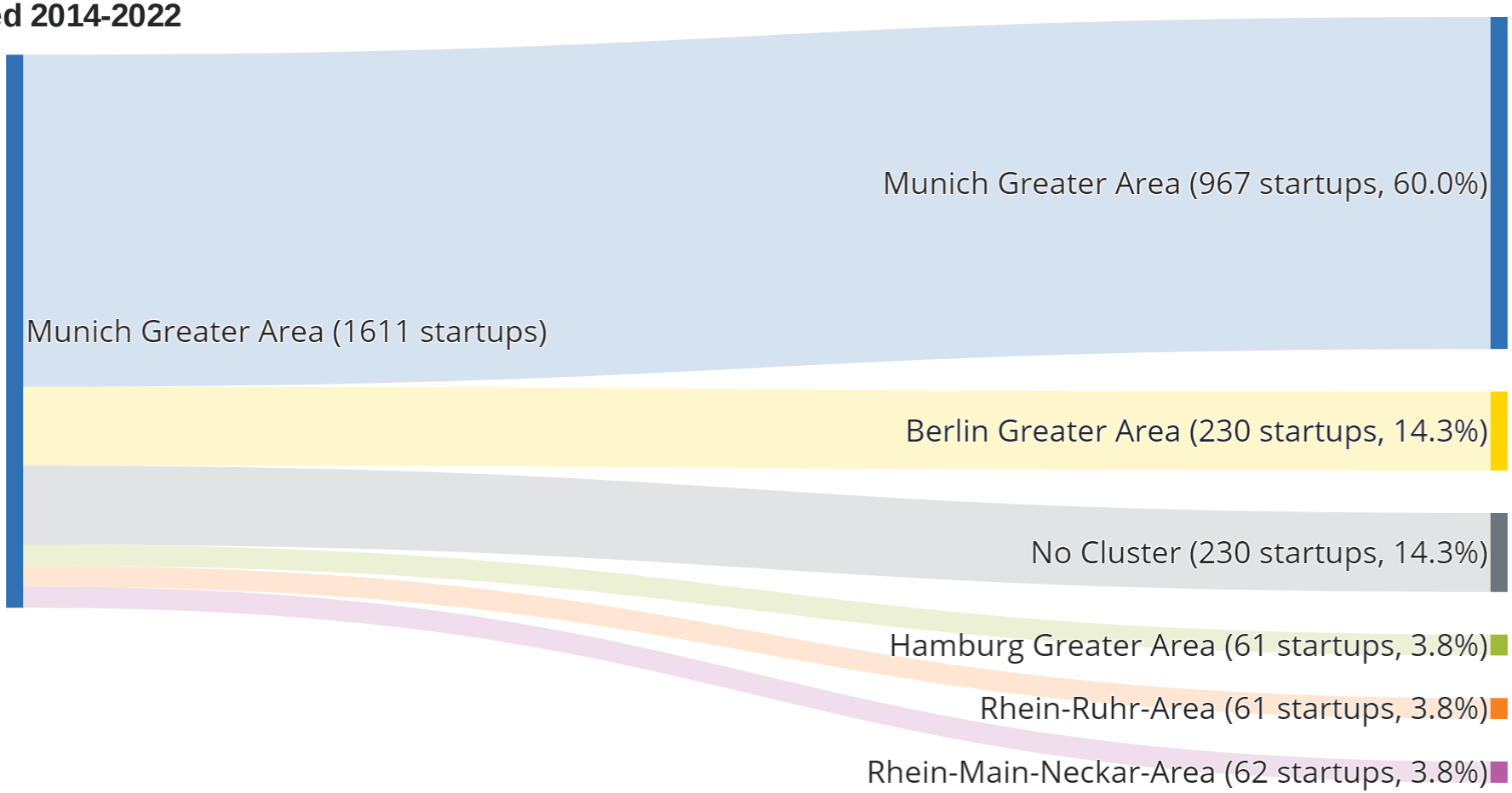


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration for separate years: Munich

Startups founded 2014-2022

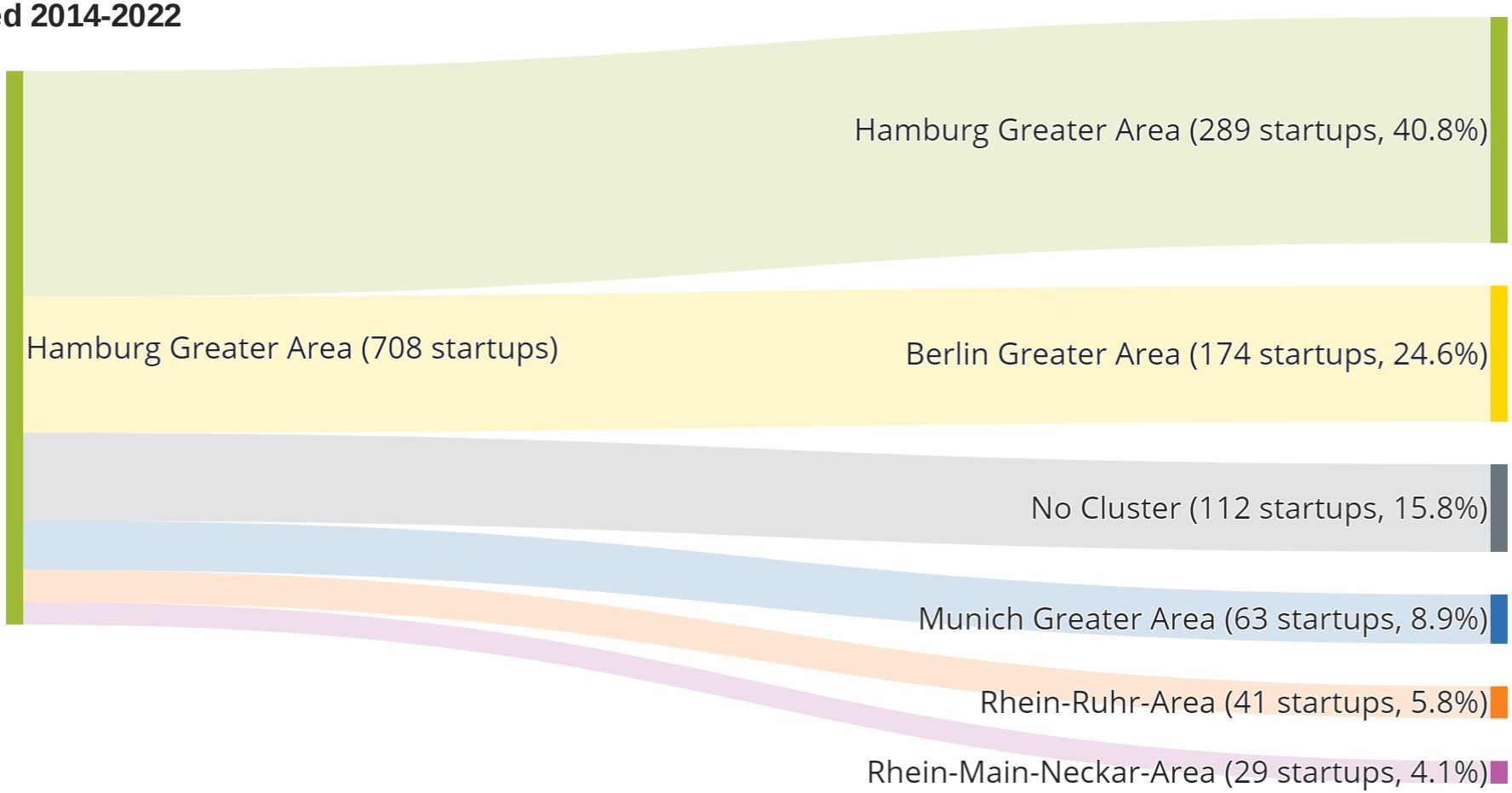


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration for separate years: Hamburg

Startups founded 2014-2022

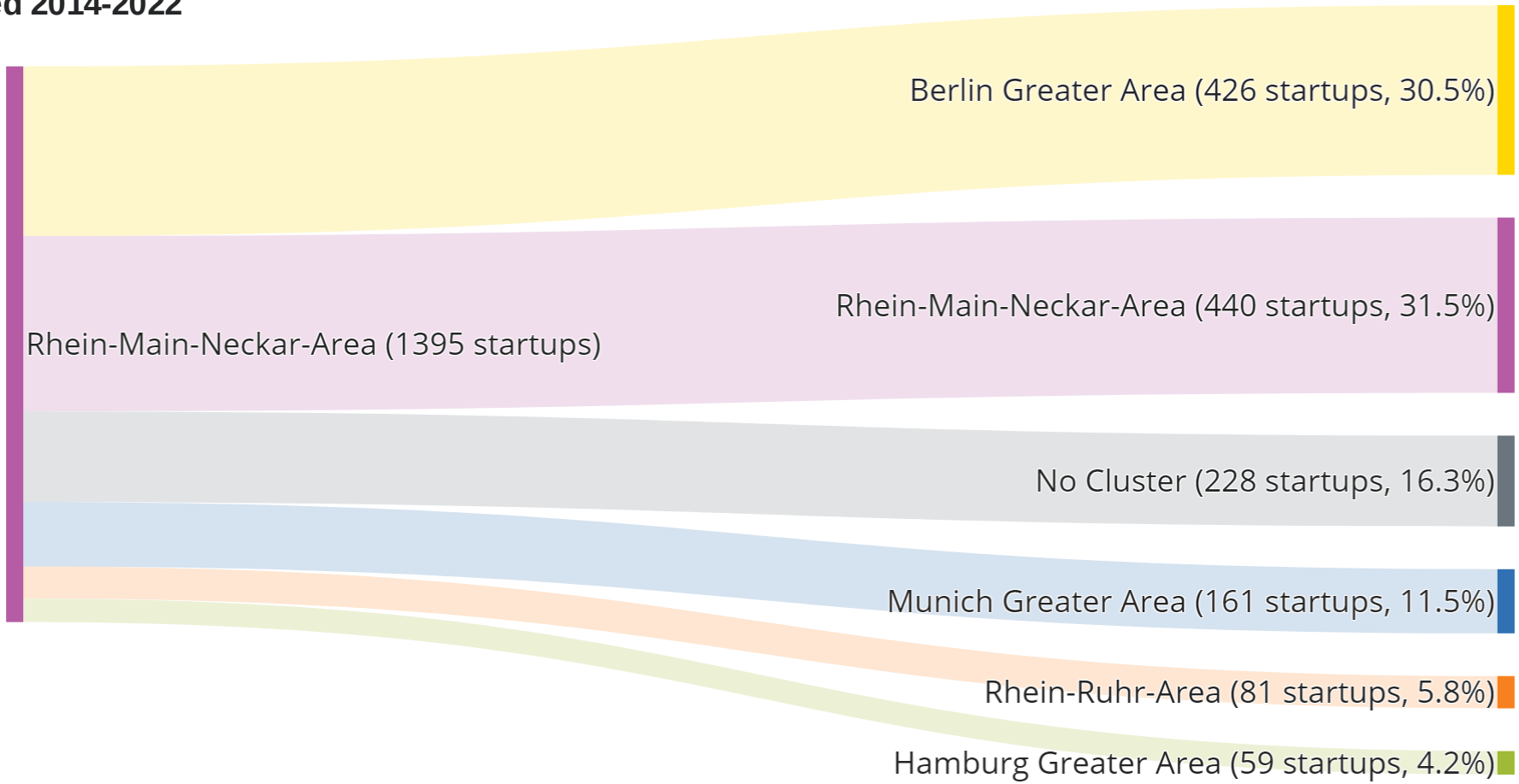


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration for separate years: Rhein-Main-Neckar

Startups founded 2014-2022

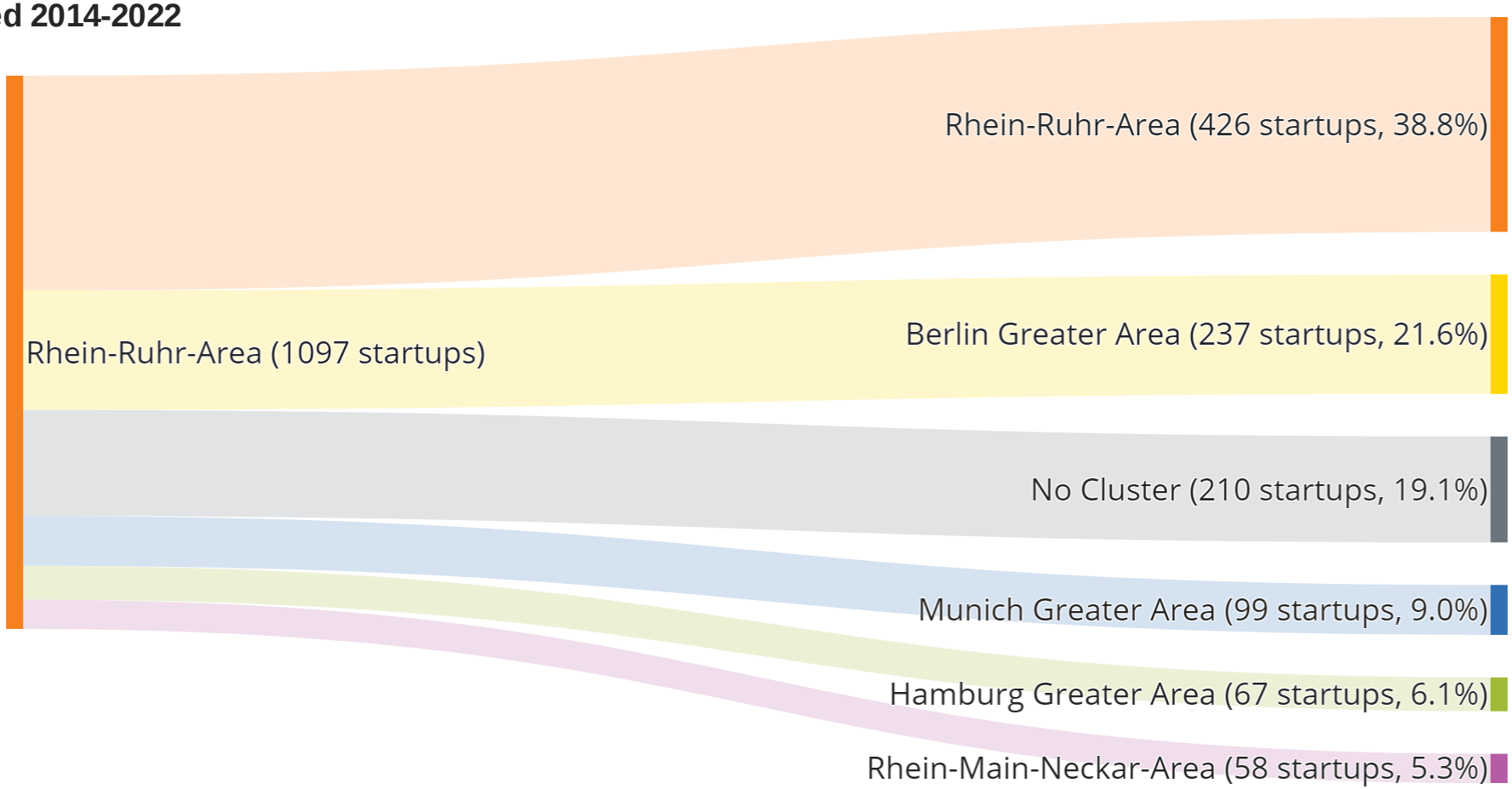


Analysis based on 60km radius around cluster center (Darmstadt); Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration for separate years: Rhein/Ruhr

Startups founded 2014-2022

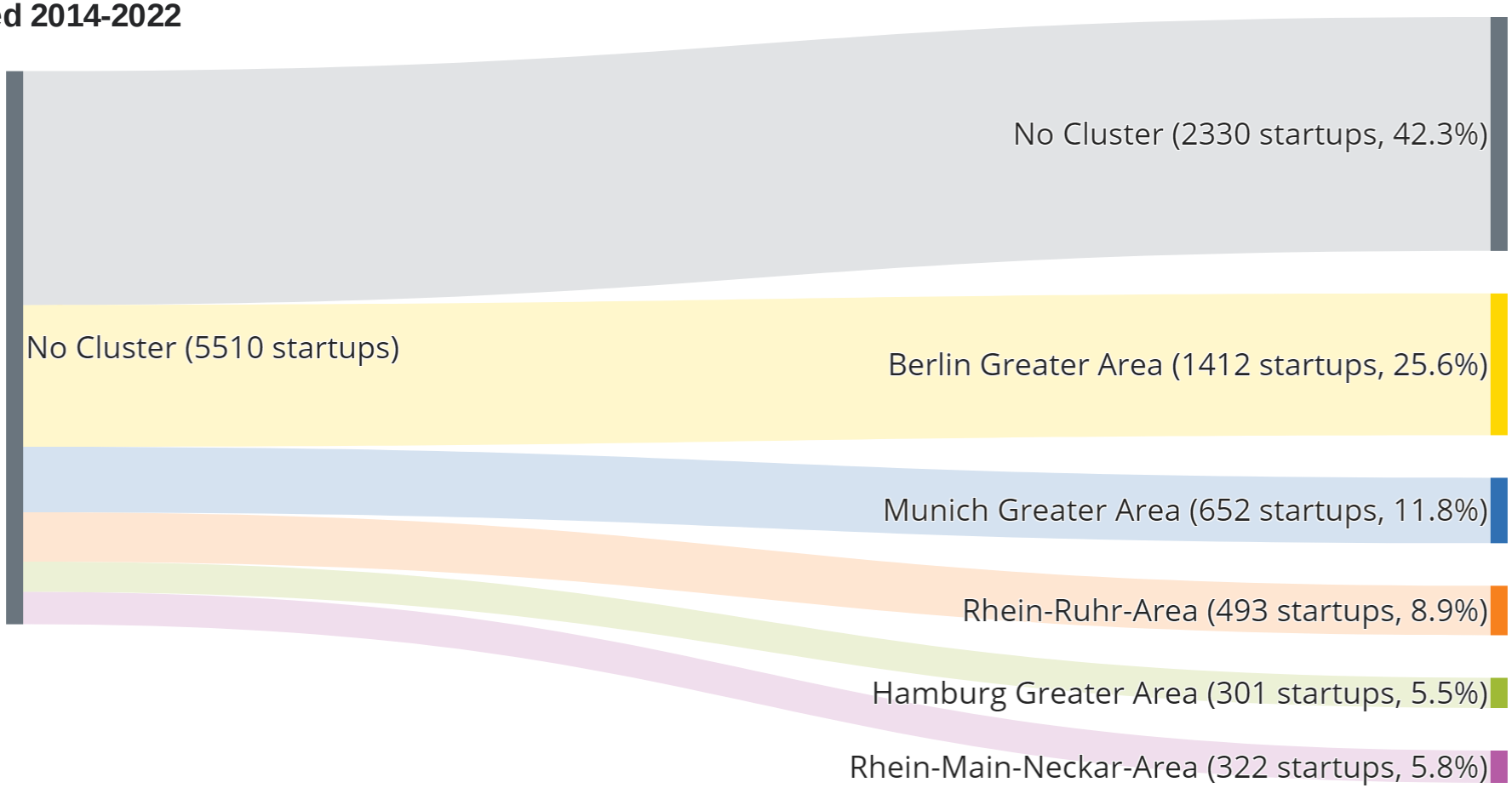


Analysis based on 60km radius around cluster center (Wuppertal); Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration for separate years: No cluster

Startups founded 2014-2022

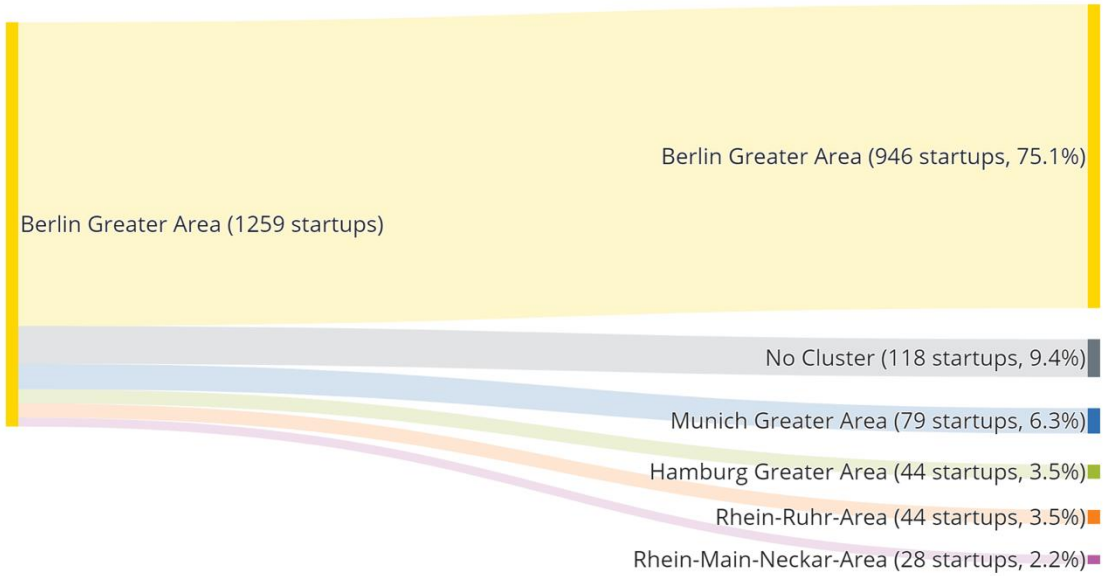


Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

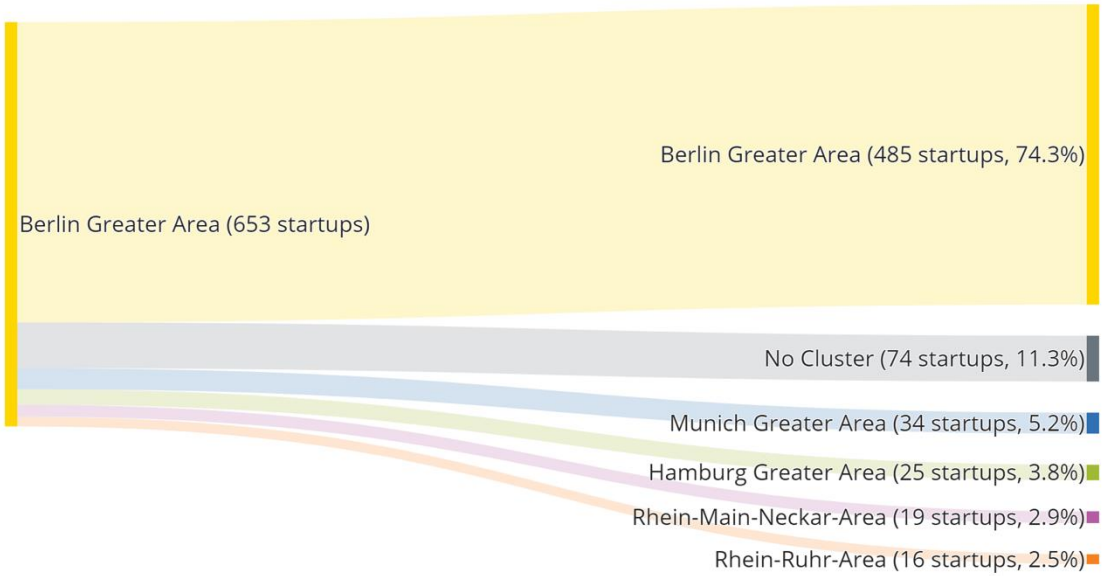
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid-pandemic: Berlin

Startups founded 2014-2019



Startups founded 2020-2022

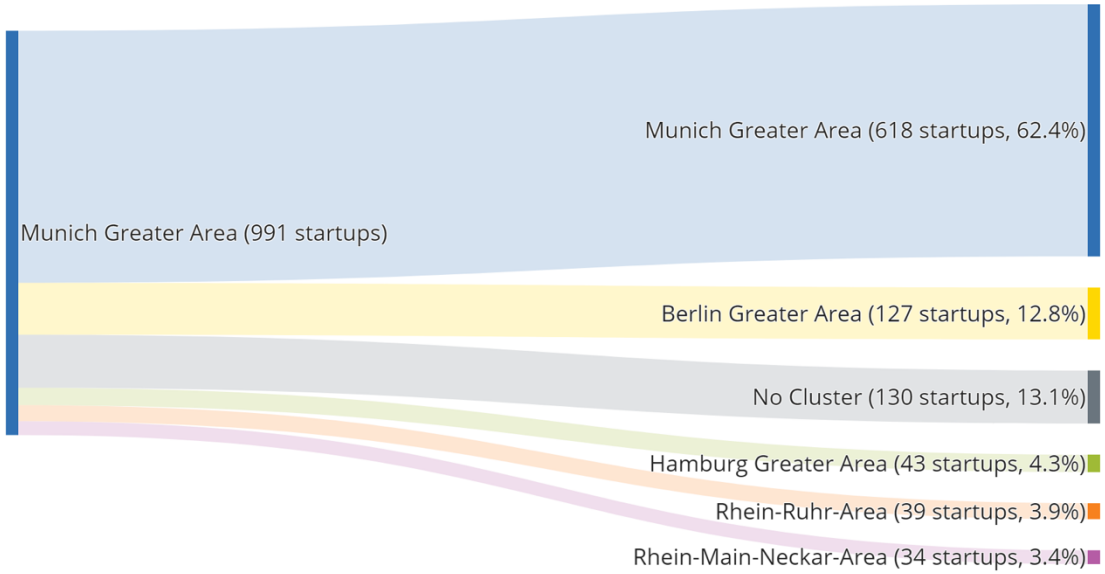


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

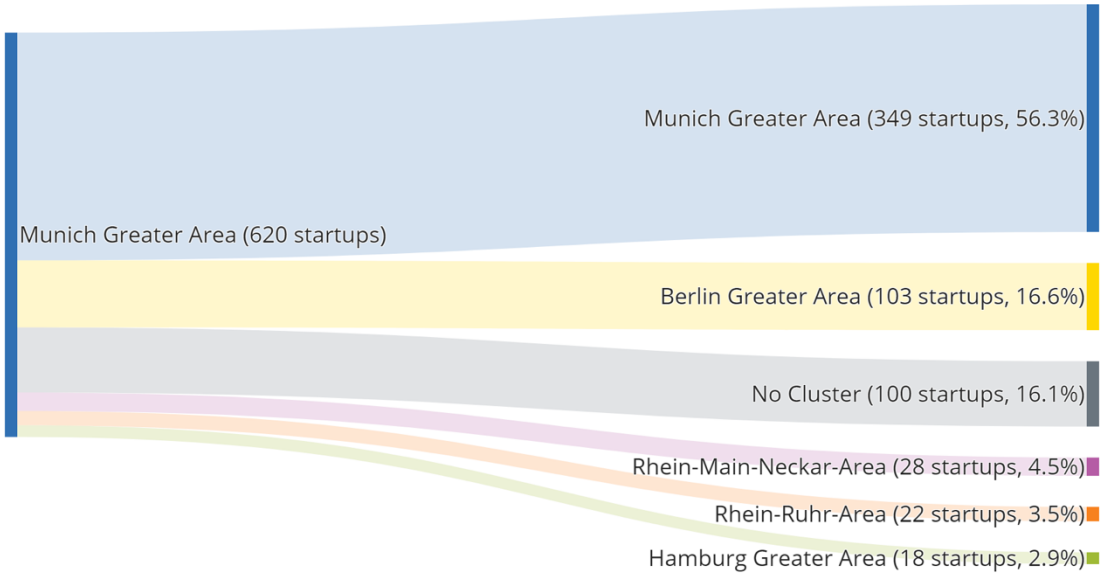
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid-pandemic: Munich

Startups founded 2014-2019



Startups founded 2020-2022

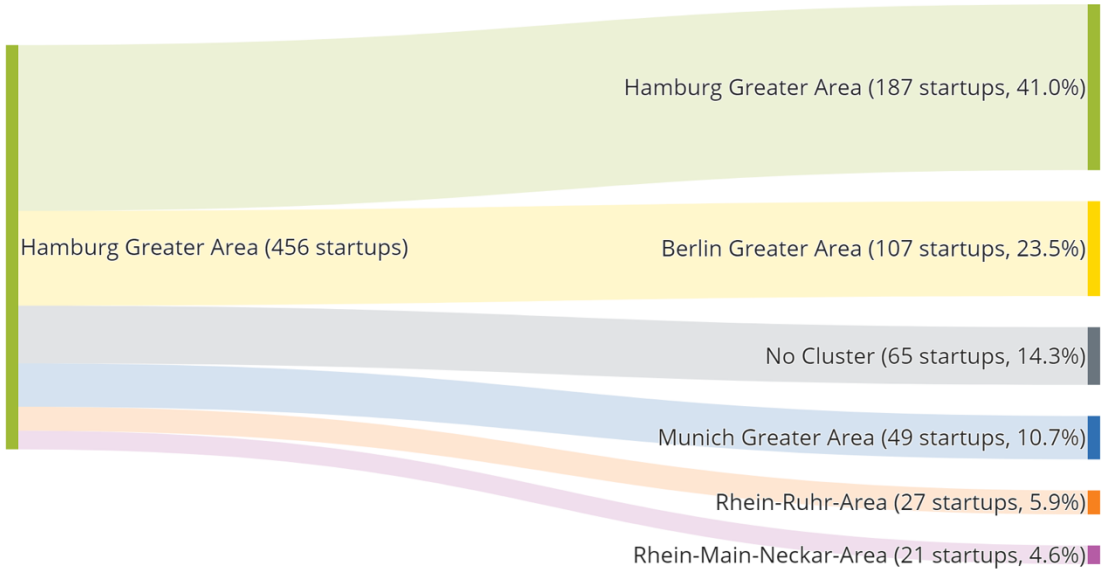


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

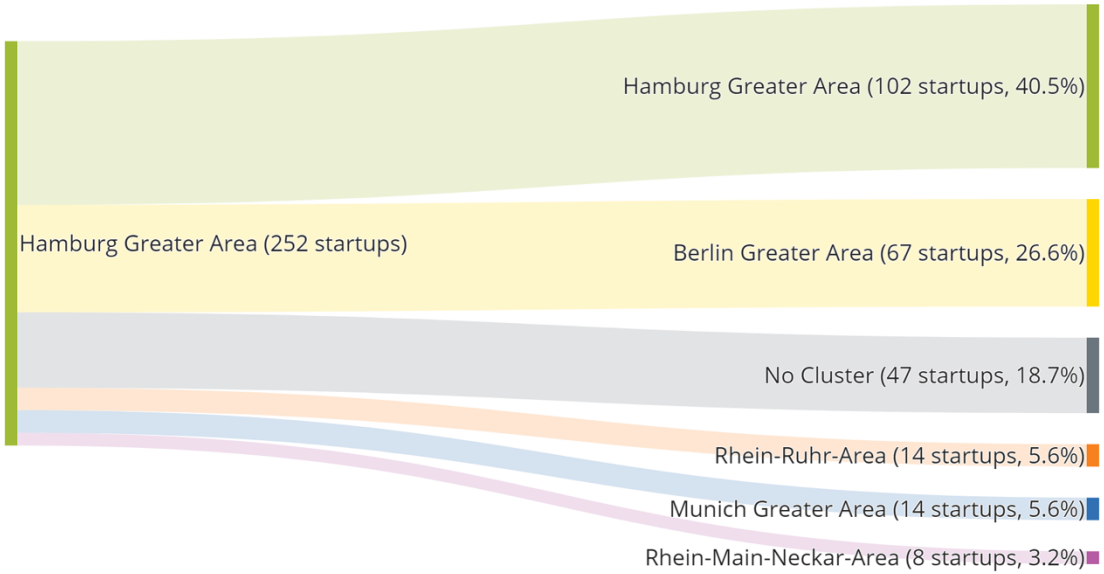
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid-pandemic: Hamburg

Startups founded 2014-2019



Startups founded 2020-2022

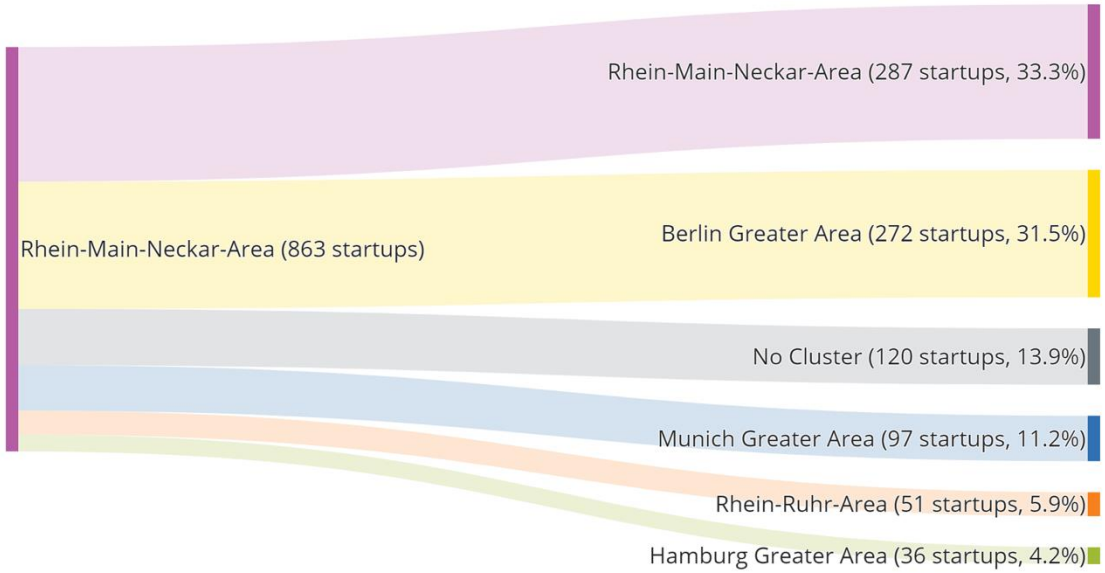


Analysis based on 60km radius around cluster center; Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

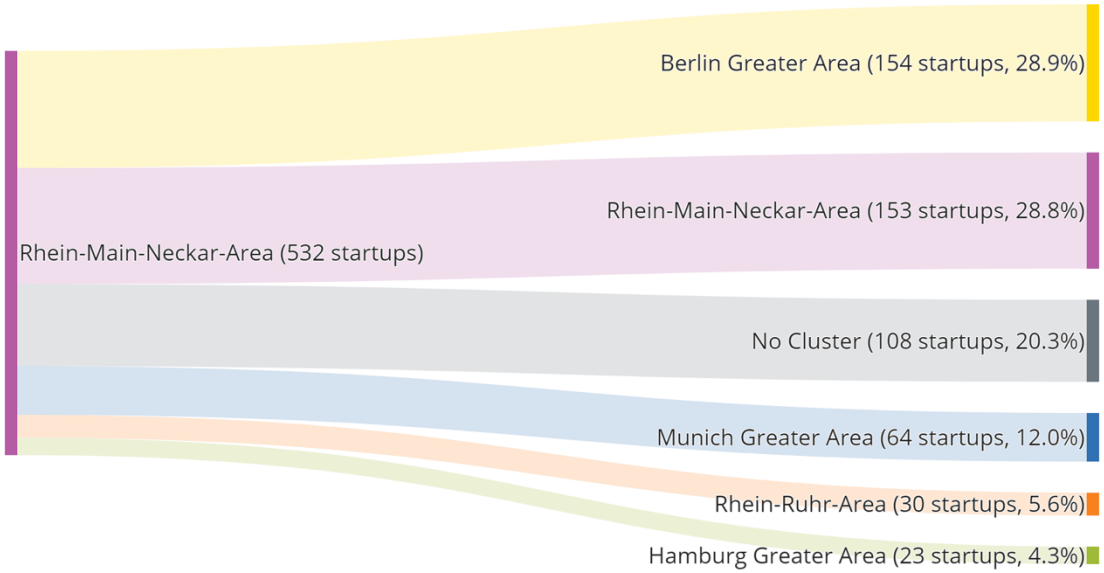
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid-pandemic: Rhein-Main-Neckar

Startups founded 2014-2019



Startups founded 2020-2022

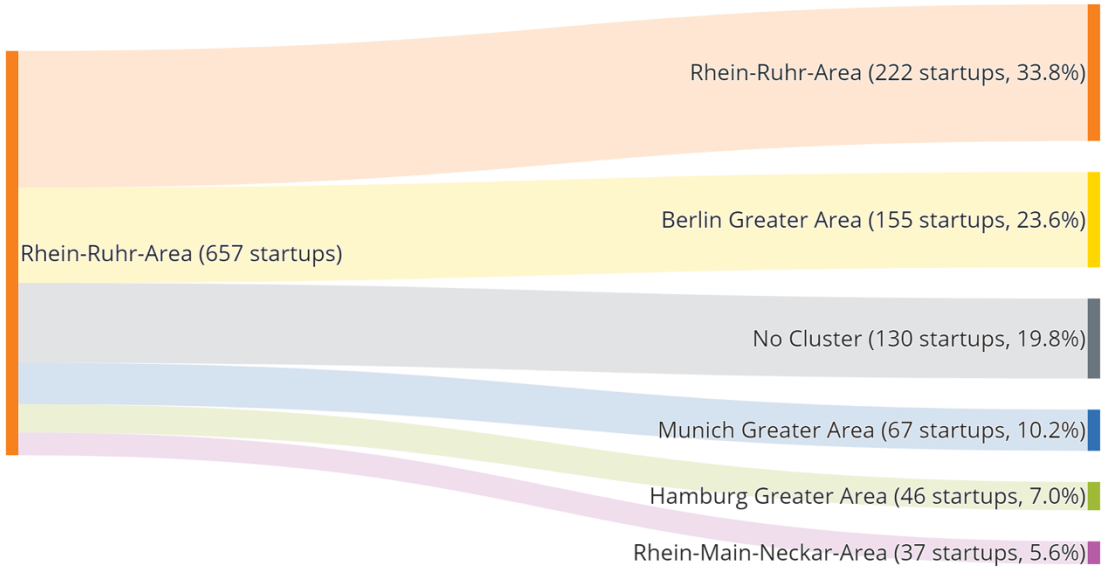


Analysis based on 60km radius around cluster center (Darmstadt); Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

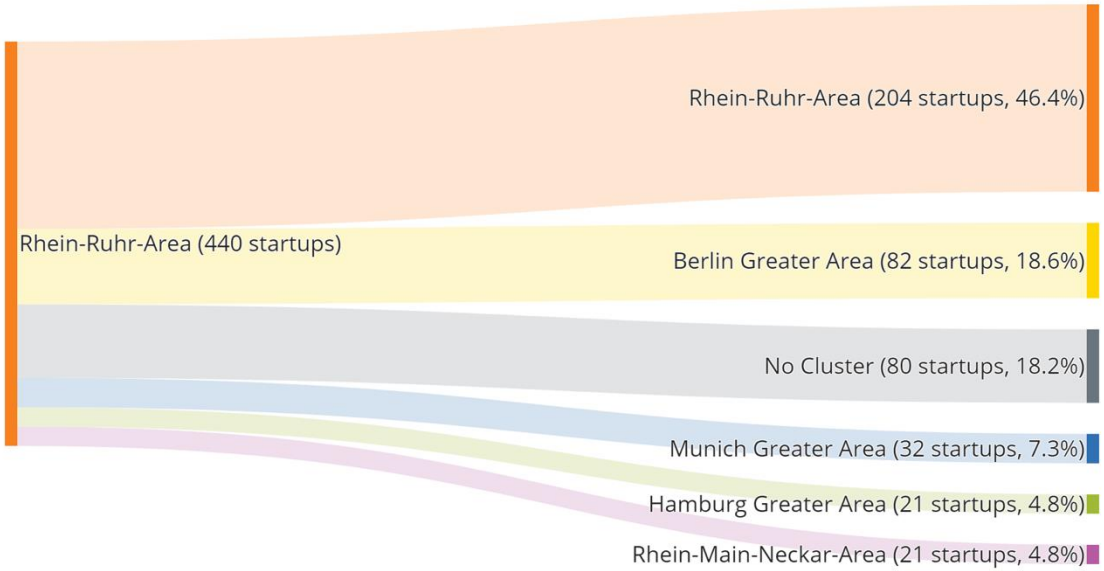
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid-pandemic: Rhein-Ruhr

Startups founded 2014-2019



Startups founded 2020-2022

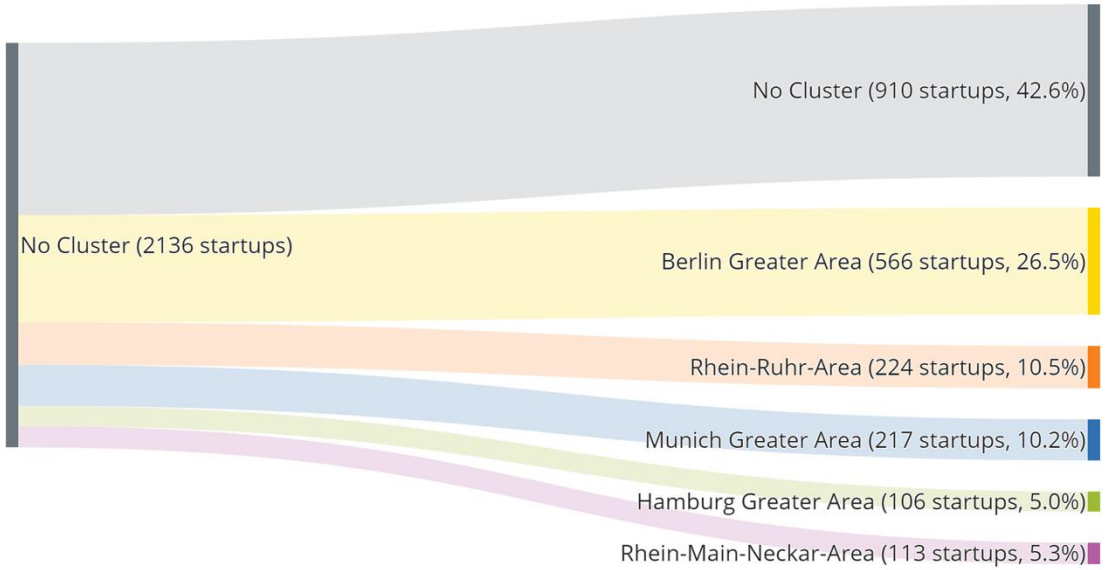


Analysis based on 60km radius around cluster center (Wuppertal); Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

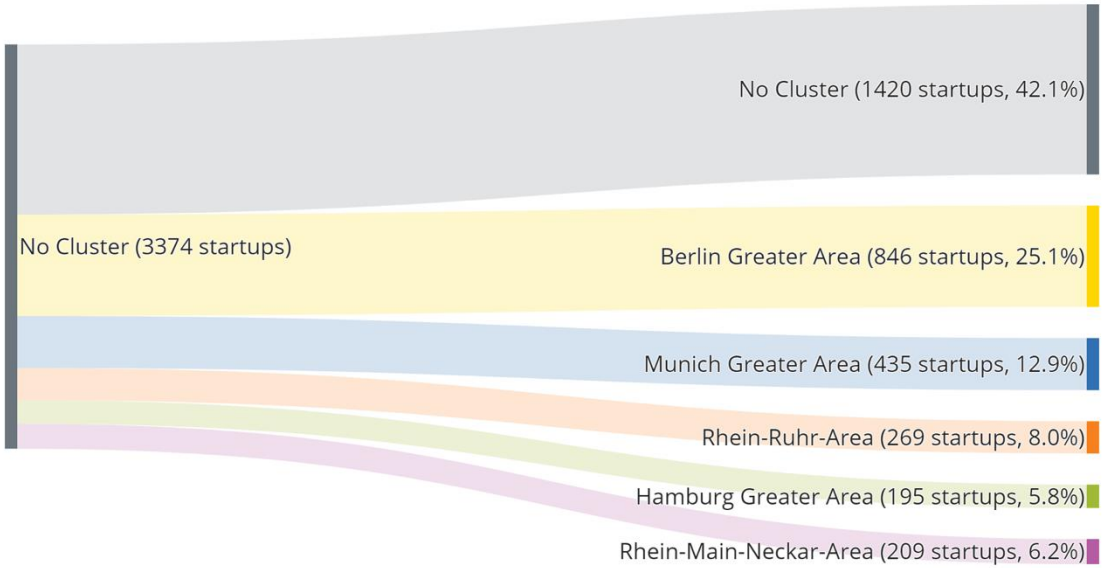
Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

7: Founder migration pre-/ post-Covid pandemic: No Cluster

Startups founded 2014-2019



Startups founded 2020-2022



Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites, DeStatis*; University data: Statistisches Bundesamt (year 2020/2021)

Contents

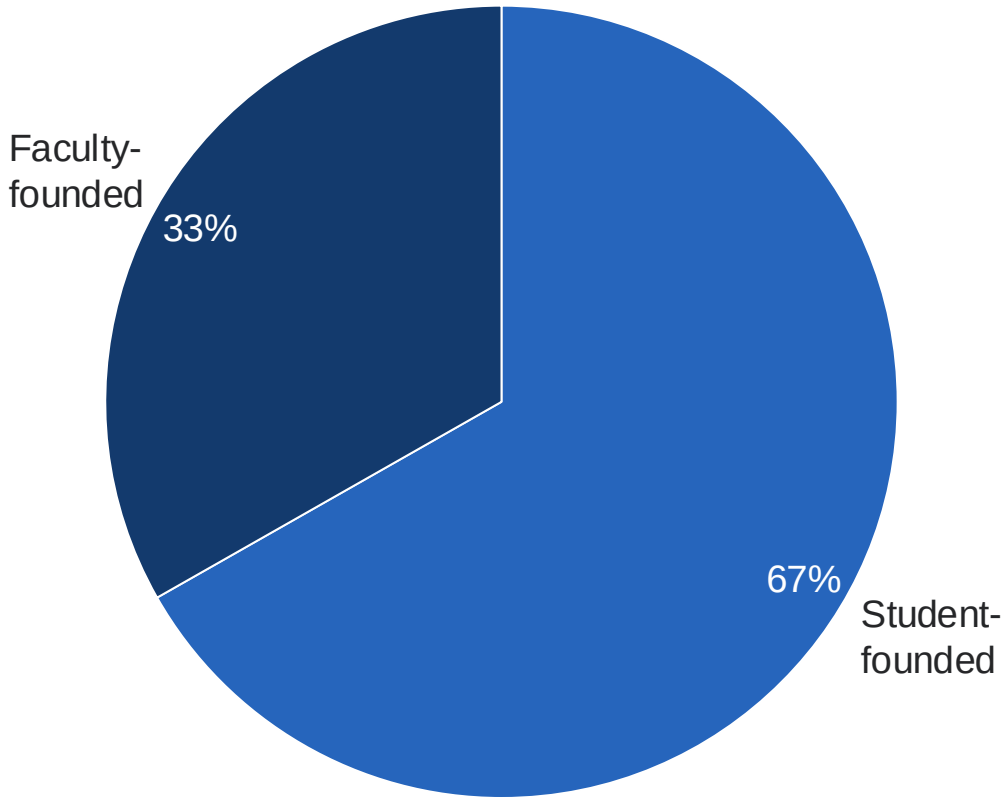
8: Student vs. faculty founded startups: Key Takeaways

- About 2/3 of startups that emerge from academic institutions are founded by former students, and 1/3 is founded by former academic faculty.
- There are more traditional, research-focused universities in the ranking of faculty-founded startups, whereas a high share of business schools are within the top 25 academic institutions for student-founded startups.
- TU Munich is leading both the ranking of student- as well as faculty-founded startups.

Image source: Pexels, 2024

8: Overview student vs. faculty founded startups

Distribution of student- vs. faculty-founded startups, in percent[1]



Classification of startups as student or faculty founded startups

The classification is based on the public LinkedIn profile of founders:

- We match a large part of all startups to LinkedIn profiles of founders
- Based on the classification as “Education” or “Experience” (i.e. job experience), we attribute a match to student: “Education”, or faculty: “Experience”
- Matches that are based on other data sources (Dealroom, Webscraping) are excluded from this analysis

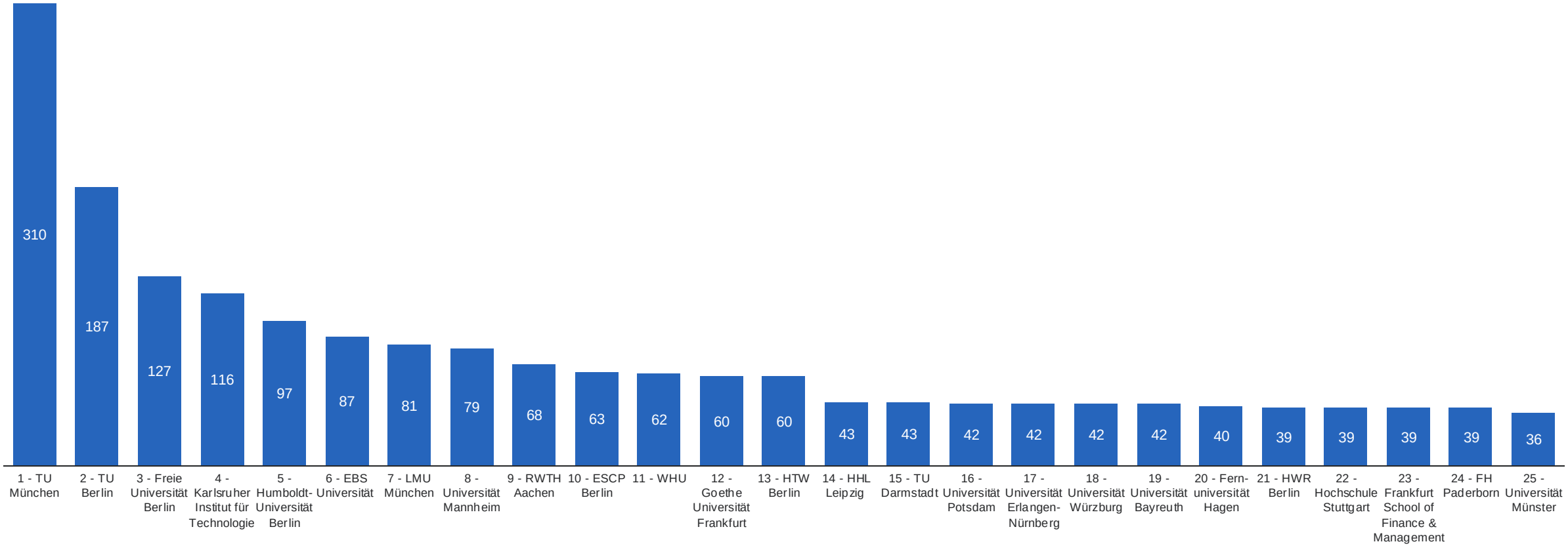
1: startups that can be attributed 100% to students or faculty of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of student-founded startups (absolute)

Number of startups that were founded by students[1]

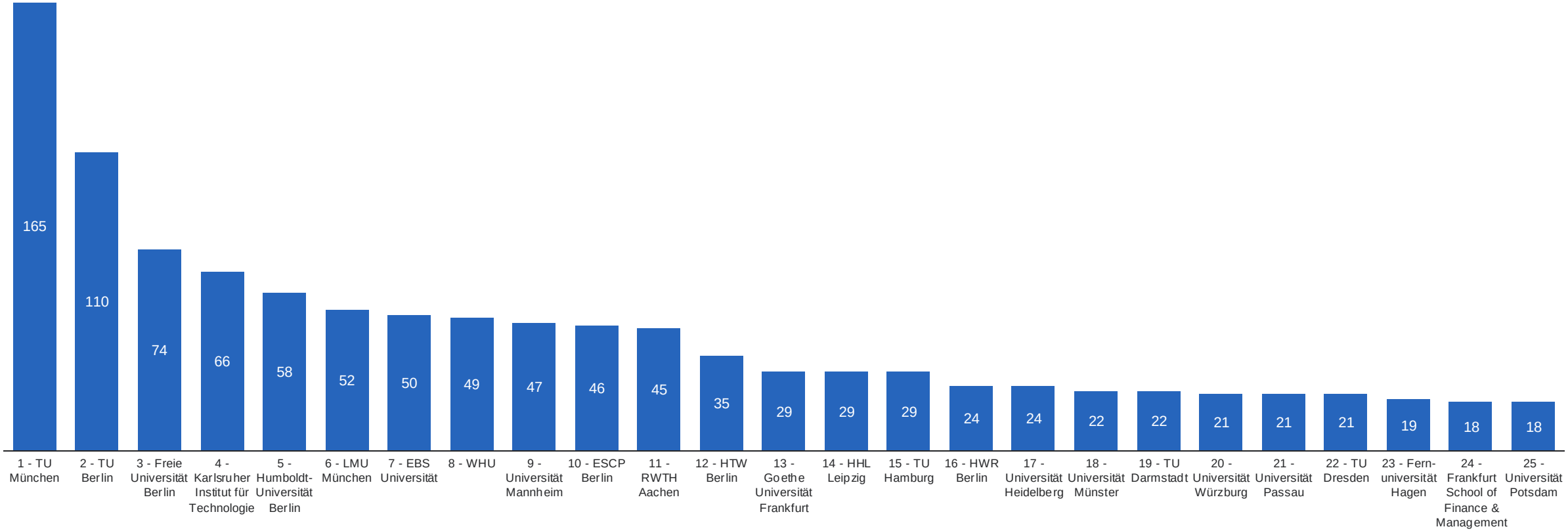


1: startups that can be attributed 100% to students of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included
Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of student-founded startups (financed startups)

Number of startups that were founded by students and have received any round of funding[1]



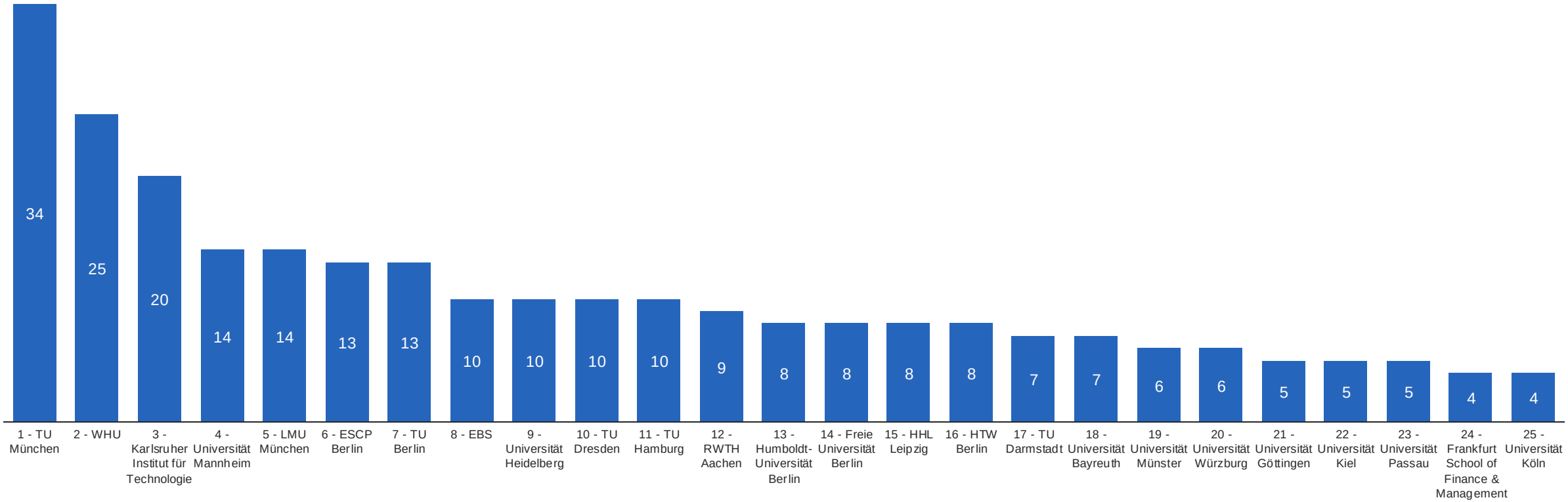
1: startups that can be attributed 100% to students of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of student-founded startups (financed startups with valuation >10mn. EUR)

Number of startups that were founded by students and have received at least 10mn EUR financing[1]



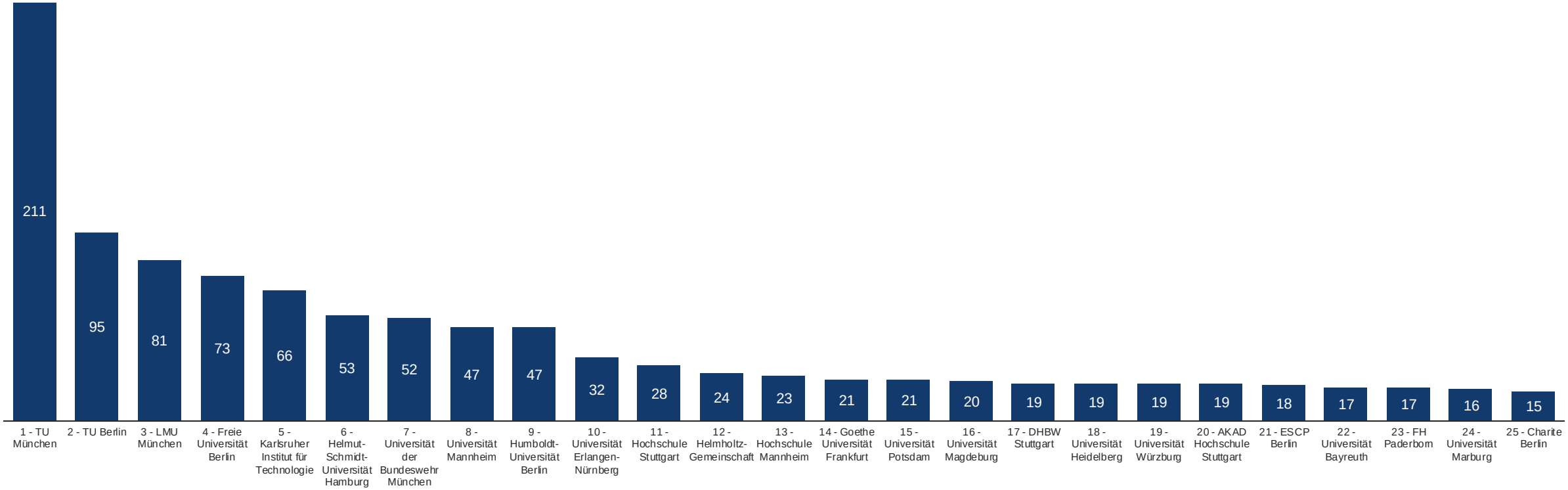
1: startups that can be attributed 100% to students of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of faculty-founded startups

Number of startups that were founded by faculty[1]



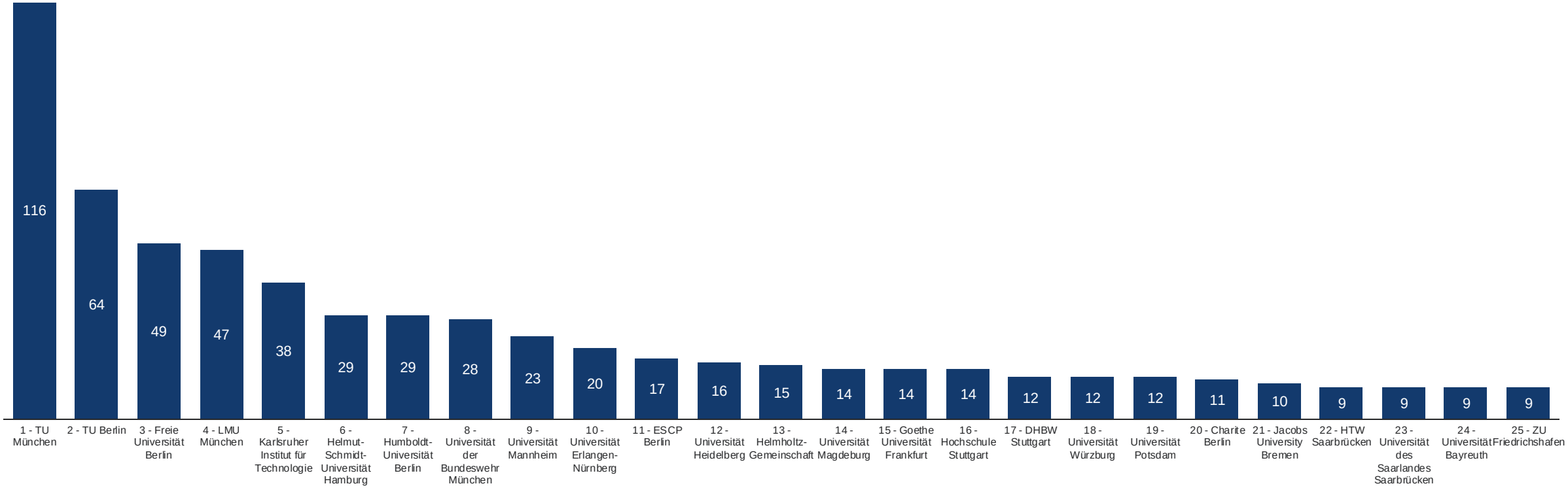
1: startups that can be attributed 100% to faculty of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of faculty-founded startups (financed startups)

Number of startups that were founded by faculty and have received any round of financing[1]



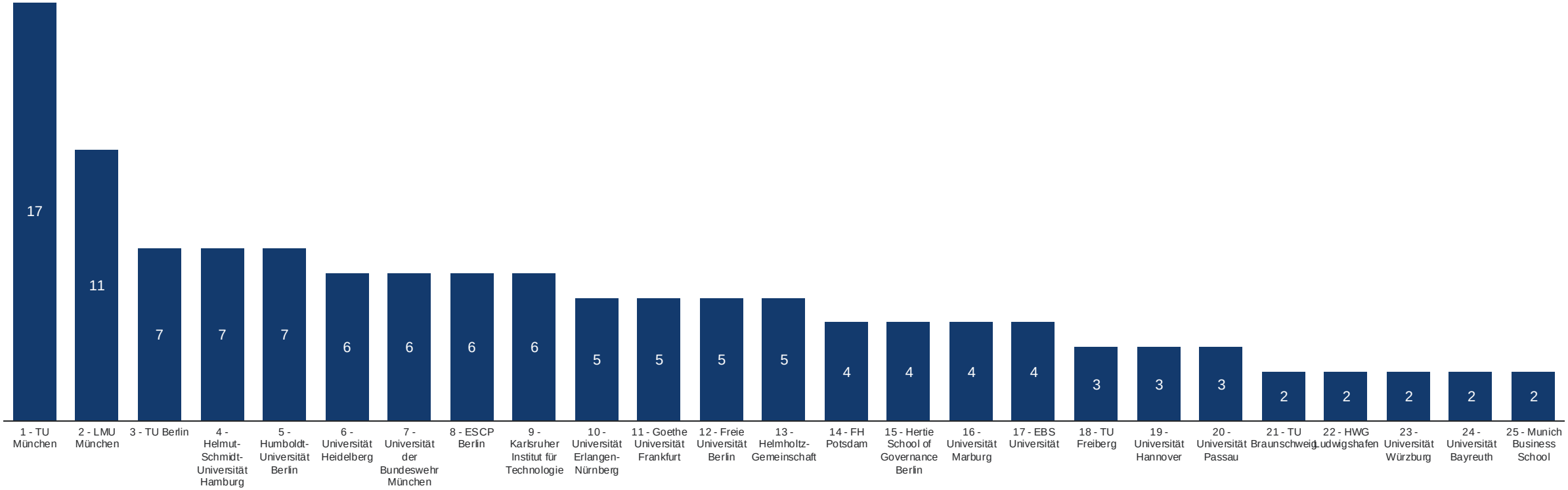
1: startups that can be attributed 100% to faculty of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

8: Ranking of faculty-founded startups (financed startups with valuation >10mn. EUR)

Number of startups that were founded by students and have received at least 10mn EUR financing[1]



1: startups that can be attributed 100% to faculty of the universities based on LinkedIn data. startups that are matched based on other data sources or are mixed student and faculty founded are not included

Included are all companies that are (1) classified as startup based on their chamber of commerce entry, or (2), are included in the Dealroom database as startup. A company is classified as startup if its new, growth-oriented, and innovative.

Sources: Startups: *StartupDetector*, *Dealroom*, *LinkedIn*, *Google Search, Company websites*; University data: Statistisches Bundesamt (year 2020/2021)

Summary of findings

- **Startup Survival Rate**: Universities of applied sciences dominate the top 10 in startup survival rates. Funded startups from technical, medical, and management-focused universities tend to have higher survival rates. City size does not significantly affect startup survival. Nevertheless, a very high survival rate may not necessarily be a positive sign, as it may also show that students from these universities may not be as encouraged to found a fast-growing company
- **Economic Impact of Top 3 and Other Selected Universities**: Universities significantly influence local economies by creating jobs and generating tax revenue through student- and faculty-founded startups. A substantial number of these startups focus on future economic developments. STEM institutions like TU Munich and TU Berlin produce a high percentage of high-tech companies (35%). A notable share of startups also aim to achieve the United Nations' Sustainable Development Goals.
- **Entrepreneurial Impact Over Time:** From 2014-2021, the number of faculty- and student-founded startups generally increased, with dips in 2016 and 2020. TU Munich consistently leads, with TU Berlin following. RWTH Aachen has notably risen to the top 5 after not being in the top 10 until 2016.
- **Average Time to Startup After Graduation**: Most founders start their ventures within 4 years post-graduation. There's an almost one-year difference between male and female founders. The time to founding varies significantly by institution, with some taking over 10 years and others less than one year. Founders with bachelor's and master's degrees are equally common, while PhD holders make up 8%.
- **Previous Industry Experience:** Siemens is the most common previous employer among founders, especially those who secure funding. Large DAX corporates dominate founders' prior experience. For funded founders, strategy consulting firms and unicorn startups are also prevalent in the top 25 previous employers.
- **Founder Diversity:** Ethnically diverse teams are more common (28%) than gender-diverse teams (4%). Over two-thirds of founders in Germany are from Europe, with less than 50% being exclusively from Western Europe. Four academic institutions have over 40% ethnically diverse teams, while the highest share of teams with at least one female founder is 15%.
- **Founder Migration:** Over 60% of founders in Berlin and Munich stay near their universities. Berlin is the top destination for migrating startups, followed by Munich. Around 30-40% of startups remain in their university area. Post-COVID, migration towards Berlin increased from Munich and Hamburg by 3-4 percentage points. There is also a growing trend of startups moving to smaller regional clusters.
- **Student vs. Faculty-Founded Startups:** Approximately two-thirds of academic institution startups are student-founded, with the remaining third founded by faculty. Research-focused universities dominate faculty-founded startups, while business schools are prevalent in the student-founded category. TU Munich leads in both student- and faculty-founded startups.

Limitations

1. **Automatic matching without manual correction**
   Due to the automated processing of the large volumes of data, not all assignments could be validated manually. Therefore, certain incorrect or missing allocations are possible. Random spot checks did not result in any anomalies.

2. **Dependence on commercial databases**
   Although a variety of data sources are used in this study, data reporting remains dependent on the commercial databases used, in particular Dealroom and StartupDetector. This dependency exists in particular for data on funding and company valuation as well as for industry classifications.

3. **No explanation of causal relationships**
   The results of this study are based on correlative analyses and do not allow any conclusions to be drawn about causal relationships. The study does not account for external economic conditions or policy changes that could impact entrepreneurial activities. Further, the study does not address regional disparities within Germany. Local economic conditions, resource availability, and regional policies can significantly impact the entrepreneurial ecosystem.

Implications and recommendations for university policy and university management

1. **Establishing objective rankings with absolute and relative metrics of entrepreneurship performance at universities:** Our results indicate significant discrepancies in the entrepreneurship performance of German universities in existing reports and rankings. It is recommended to establish standardized evaluation and assessment procedures for the entrepreneurial achievements of universities. The Munich Ranking will regularly provide an objective ranking starting in 2023.

2. **Universities should continue to invest into diversity of founders**: Universities should continue and expand investments in programs that support diverse founders. This includes funding programs and scholarships, mentorship programs, and educational campaigns targeting underrepresented groups by different diversity dimensions (e.g., gender, ethnicity).

3. **Bridge the Gender Gap**: Universities should investigate the reasons behind the almost one-year difference in startup founding times between male and female graduates and implement mentorship and support programs targeted at female entrepreneurs.

4. **Strengthen Local Ecosystems**: Universities should invest in strengthening their local entrepreneurial ecosystems to retain more graduates. This can include incubators, accelerators, co-working spaces, and networking events that make staying in the local area more attractive. Also, policy makers should strive to counteract the migration trend towards larger cities like Berlin and Munich by focusing on developing smaller regional clusters. This includes investing in infrastructure, providing incentives for businesses to set up in these areas, and creating policies that support regional innovation.

5. **Investigate drivers for startup success through causal-effect analysis**: To support students and faculty in building successful startups, universities should assess what drives the high success quotas of top-ranked universities. Traditional universities could benefit from adopting practical, hands-on approaches to education and research as part of entrepreneurship programs given the high startup survival rates from universities of applied sciences.

We would like to thank all contributors

Partner und Supporter

TUM ForTe - Forschungsförderung & Technologietransfer
Technische Universität München

Special thanks to Dr. Sieglinde Amelia Walter for her continued support and dedication to the study

GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung
thebright initiative
startupdetector
SerpApi
Bayerisches Staatsministerium für Wissenschaft und Kunst
dealroom.co
CDTM CENTER FOR DIGITAL TECHNOLOGY AND MANAGEMENT

Supported as part of the German "Exzellenzstrategie"